5

9-

NASA TECHNICAL MEMORANDUM

NASA TM X- 72661 COPY NO.DMS DR 2191

N75-25995

SPACE SHUTTLE ORBITER TRIMMED CENTER OF GRAVITY EXTENSION STUDY

VOLUME I - EFFECTS OF CONFIGURATION MODIFICATIONS ON THE AERODYNAMIC CHARACTERISTICS OF THE 140 A/B ORBITER AT MACH 10.3

Peter T. Bernot

June 1975

This informal documentation medium is used to provide accelerated or special release of technical information to selected users. The contents may not meet NASA formal editing and publication standards, may be revised, or may be incorporated in another publication.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
LANGLEY RESEARCH CENTER, HAMPTON, VIRGINIA 23665

1. Report No.	2. Government Accession No.	3. Recipient's Catalog	No.
NASA TM X-72661			
4. Title and Subtitle Space Shuttle	5. Report Date		
Gravity Extension Study: Vo	olume I - Effects of Configu-		
	Aerodynamic Characteristics	6. Performing Organi	zation Code
of the 140 A/B Orbiter at Ma	ach 10.3.		
7. Author(s)		8, Performing Organia	ration Report No.
Peter T. Bernot			
		10. Work Unit No.	
9. Performing Organization Name and Address	.		
NASA-Langley Research Cen	ter	11. Contract or Grant	No.
Hampton, VA 23665		+	
•		13. Type of Report as	nd Period Covered
12. Sponsoring Agency Name and Address		1	
National Aeronautics and	Space Administration	Technical I	
Washington, DC 20546	opuse nuministration	14. Sponsoring Agency	Code
15. Supplementary Notes	tion molecule subject to make	rible newicion	and/on
inclusion in later formal	tion release, subject to poss	PIDIE LEVIZION	and/or
inclusion in later format	publication.		
16. Abstract			
Longitudinal and late	eral-directional characteris	tics were obta	ined on
	of the Rockwell Internation		
	ifications, designed to exten	•	
	ns forward of the 65 percent		
	es, two canard trimmers, and		
	an angle-of-attack range of		
Revnolds number of 1.03 m	illion based on body referen	ce length. Da	ta were
	and body flap deflected at		d full-down
	stigation, designated as LA-		
	low Hypersonic Tunnel (Test		
	•		
			•
			į
17. Key Words (Suggested by Author(s)) (STAF	R category underlined) 18. Distribution Stateme	ent	
Space Vehicles			
Space Vehicles Shuttle Orbiter			
Stability and Control	Unclassified	- Unlimited	
30.070	1	_	
19. Security Classif, (of this report)	20 Conview Classif (of this speed)	21. No. of Pages	22. Price*
1	20. Security Classif. (of this page)	l ·	\$5.75
Unclassified	Unclassified	130	1
,	echnical Information Service, Springfield, Virginia 2	2151	
*Available from { STIF/NASA So	ientific and Technical Information Facility, P.O. Bo	x 33, College Park, MD 20	740
	. ,,		

CONTENTS

					<u>PAGE</u>
SUMM ARY			•	•	1
INTRODUCTION			•		2
SYMBOLS					3
TEST FACILITY					4
MODELS					5
CONFIGURATIONS TESTED			•		6
TESTS			٠	•	6
DATA REDUCTION			•	•	7
PRESENTATION OF RESULTS	•			•	8
DISCUSSION OF RESULTS	•			•	8
REFERENCES					10
TABLES					
I. COMPONENT DIMENSIONAL DATA .					11
II. DATA SET/RUN NUMBER COLLATION	SU	MMARY	•	•	17
FIGURES					
MODEL	•			•	20
AXIS SYSTEMS	•				32
DATA	•				33
APPENDIX - TABULATED SOURCE DATA					103

INDEX OF FIGURES

FIGURE	MODEL FIGURE TITLES	PAGE
1	Sketches of baseline orbiter and model modifications	
	(a) Layout of 140 A/B orbiter(b) Forebody modification B2(c) Forebody modification B4(d) Wing-body fillets(e) Canard trimmers	20 21 22 23 24
2	Photographs of several test configurations $\delta_{\rm e} = 10^{\rm o}$, $\delta_{\rm BF} = 16.3^{\rm o}$, $\delta_{\rm SB} = 55^{\rm o}$	
	 (a) Baseline 140 A/B orbiter model (b) Modified model with C3 canard trimmer (c) Modified model with C4 canard trimmer (d) Modified model with S1 fillet (e) Modified model with B2 forebody and 	25 26 27 28
,	S2 fillet (f) Modified model with B4 forebody (g) Modified model with fillet removed	29 30 31
3	Axis systems	32
FIGURE	DATA FIGURE TITLES PLOT SCHEDULE	PAGE
4	Effect of orbiter nose shape on longitudinal aerodynamic characteristics (B26, B2, B4) (A)	34-40
5	Effect of wing fillet and orbiter nose shape on longitudinal aerodynamic characteristics. (B26 S0, B26 S2, B2 S2)(A)	41-47
6	Effect of canard and orbiter nose shape on longitudinal aerodynamic characteristics.(B26, B26 C3, B2 C3) (A)	48-54
7	Effect of canard configuration on longitudinal aerodynamic characteristics. (C3, C4)	55-61
8	Effect of wing fillet configuration on longitudinal aerodynamic characteristics. (SO, S1, S2) (A)	62-68

INDEX OF FIGURES (CONCLUDED)

		PLOT	
FIGURES	DATA FIGURE TITLES	SCHEDULE	PAGE
9	Effect of wing fillet on longitudinal aerodynamic characteristics (SO, SO off)	(A)	69-75
10	Effect of control deflections on baseline longitudinal aerodynamic characteristics	(A)	76-82
11	Effect of control deflections on orbiter wire canard longitudinal aerodynamic characteristics (C3)	th (A)	83-89
12	Effect of control deflections on orbiter wing fillet longitudinal characteristics (S2)	th (A)	90-96
13	Effect of orbiter nose shape on lateral-directional aerodynamic characteristics (B26, B2, B4)	(B)	97
14	Effect of wing fillet and orbiter nose shape on lateral-directional characteristics (B26 S0, B26 S2, B2 S2)	e (B)	98
15	Effect of canard and orbiter nose shape on lateral-directional characteristics (B26, B26 C3, B2 C3)	(B)	99
16	Effect of canard configuration on lateral-directional characteristics (C3, C4)	(B)	100
17	Effect of wing fillet on lateral-directiona aerodynamic characteristics (SO, SO off)	1 (B)	101
18	Effect of wing fillet configuration on lateral-directional characteristics (SO, S1, S2)	(B)	102

PLOT SCHEDULE:

- (A) CN vs CLM; CN, CA, CLM, CL, CD, L/D vs ALPHA
- (B) DCY/DB, DCYNDB, DCBLDB vs ALPHA

SPACE SHUTTLE ORBITER TRIMMED CENTER OF GRAVITY EXTENSION STUDY: VOLUME I ~ EFFECTS OF CONFIGURATION MODIFICATIONS ON THE AERODYNAMIC CHARACTERISTICS OF THE 140 A/B ORBITER AT MACH 10.3

(LA-47)

BY

Peter T. Bernot

SUMMARY

Longitudinal and lateral-directional characteristics at Mach 10.3 have been obtained on a 0.010-scale model of the Rockwell International 140 A/B orbiter having several modifications. These modifications, designed to extend trim capability at center-of-gravity locations forward of the 65 percent fuse-lage station, consisted of two forebodies, two canard trimmers, and two bodywing fillets. Data were obtained over an angle-of-attack range of 12^{0} to 36^{0} at a Reynolds number of 1.03×10^{6} based on body reference length. Elevon/body flap deflections were $-40^{0}/-11.7^{0}$ and $10^{0}/16.3^{0}$ for the configurations tested; speed brake deflection angle was a constant 55^{0} . This investigation was conducted in the NASA/Langley Continuous Flow Hypersonic Tunnel.

INTRODUCTION

The current design values of the center-of-gravity (c.g.) locations for the shuttle orbiter range from 65 percent to 67.5 percent of the body length. Payload planners have indicated the desirability of extending this c.g. range approximately 5 percent in the forward direction to accommodate future payload requirements. At the request of the Johnson Space Center, a study has been undertaken at Langley Research Center to investigate the effects of several modifications designed to extend trim capability to more forward c.g. locations. In order to have a minimal impact on the shuttle program, these modifications were designed to be adaptable to the present orbiter without seriously altering the subsystems now fixed.

This paper presents the static stability and control results for several modified versions of the Rockwell International 140 A/B orbiter (0.010 scale) at a Mach number of 10.3 and a Reynolds number, based on body length, of 1.03×10^6 . These modifications consisted of two forebodies incorporating nose cant (nose bent upward), two canard-type trimmers of varying size, and two wing-body fillets having larger planform areas than the currently-designed fillet. Force and moment data were obtained over an angle-of-attack range of 12^0 to 36^0 at sideslip angles of 0^0 and -5^0 . The modified versions were tested with elevon/body flap deflections of $-40^0/-11.7^0$ and $10^0/16.3^0$ which represented operational control limits associated with the forward and aft c.g. locations, respectively. A speed brake deflection of 55^0 was used for all tests. This investigation was conducted in the Langley Continuous Flow Hypersonic Tunnel.

SYMBOLS

SYMBOL	DATAMAN SYMBOL	DEFINITION
b	BREF	wing span
ō	LREF	wing mean aerodynamic chord
CA	CA	axial-force coefficient, Axial force
c _D	CD	drag coefficient, <u>Drag</u> qS
c ^L	CL	lift coefficient, <u>Lift</u> qS
c	CBL	rolling-moment coefficient, $\frac{\text{Rolling moment}}{\text{qSb}}$
c _ຂ c _m	DCBLDB	rolling-moment coefficient derivative, with respect to beta, per degree
C _m	CLM	pitching-moment coefficient, $\frac{\text{Pitching moment}}{\text{qS } \overline{\text{c}}}$
c _N	CN	normal-force coefficient, $\frac{Normal\ force}{qS}$
C _n	CYN	yawing-moment coefficient, $\frac{\text{Yawing moment}}{\text{qSb}}$
$c_{n_{\boldsymbol{\beta}}}$	DCYNDB	yawing-moment coefficient derivative, with respect to beta, per degree
c _Y	СҮ	side-force coefficient, $\frac{\text{Side force}}{\text{qS}}$
$c_{Y_{\beta}}$	DCY/DB	side-force coefficient derivative, with respect to beta, per degree
FRL	FRL	fuselage reference line
l		fuselage reference length
L/D	L/D	lift-drag ratio, C_L/C_D
М	MACH	Mach number
MRP	MRP	moment reference point
q	Q(NSM)	dynamic pressure, ½ ρV ²

SYMBOL	DATAMAN SYMBOL	DEFINITION
R	RN	Reynolds number based on body length
S	SREF	total wing planform area
٧		velocity
X,Y,Z	X0,Y0,Z0	orbiter station numbers
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
$^{\delta}$ BF	BDFLAP	body flap deflection angle, positive with trailing edge down, degrees
δ _e	ELEVTR	elevon deflection angle, positive with trailing edge down, degrees
δ _{SB} ,	SPDBRK	split rudder flare angle, positive with trailing edges outward, degrees
ρ		mass density of air

TEST FACILITY

The Mach 10 nozzle of the Langley Continuous-Flow Hypersonic Tunnel is designed to operate at stagnation pressures of 15 to 150 atmospheres at temperatures up to 1089 K (1960 R). Air is preheated electrically by passing it through a multi-tube heater. The nozzle has a 0.78 m (31 in.) square test section and incorporates a moveable second minimum. Continuous operation is achieved by passing the air through a series of compressors. Additional information on this facility is given in reference 1.

MODELS

The baseline test model, a 0.010-scale version of the RI-140 A/B orbiter, was fabricated from aluminum at the Langley Research Center. (See fig. 1(a).) Component designations of the baseline model are:

B26 - fuselage

C9 - canopy

M7 - OMS pods

F10 - body flap

W116 - wing

SO - wing-body fillet

E26 - elevon

V8 - vertical tail

R5 - rudder

Each component is described in the dimensional data sheets in table I.

Modifications to the baseline model consisted of two forebodies, two wing-body fillets, and two canard-type trimmers. The modified forebodies, B2 and B4 in figures 1(b) and 1(c), had increased nose cant (nose bent up). The B2 forebody had the same planform as the baseline, but the B4 forebody was longer and wider. The modified wing-body fillets, S1 and S2, had larger planform areas than the baseline fillet, S0. Details of the modified fillets are presented in figure 1(d). The canard trimmers, C3 and C4 (fig. 1(e)), had planform areas (per panel) of 6.04 m^2 (65.0 ft^2) and 9.84 m^2 (105.9 ft^2), respectively, with a leading edge sweep angle of 55^0 .

CONFIGURATIONS TESTED

A total of ten configurations were tested which included a baseline model of the 140 A/B orbiter. Six modified configurations were tested to determine the individual effects of forebodies B2 and B4; fillets S1 and S2; and canards C3 and C4. Of the remaining three configurations, one incorporated the B2 forebody with the S2 fillet; another combined the B2 forebody with the C3 canard; and the final configuration represented the orbiter model with the baseline fillet, S0, removed. Photographs of several test configurations are presented in figure 2.

All configurations were tested with elevon/body flap deflections of $10^{\rm o}/16.3^{\rm o}$ and $-40^{\rm o}/-11.7^{\rm o}$ with the exception of the final configuration which was tested only with positive deflection angles. Additional tests at other elevon/body flap deflection angles were made on several selected configurations as indicated in table II.

TESTS

Tests were conducted at a stagnation pressure of 5.17 MPa (750 psia) and an average stagnation temperature of 1006 K (1810 R). The free-stream Mach number was 10.33 at a Reynolds number of 1.03×10^6 based on fuselage length. The angle-of-attack range was 12^0 to 36^0 at sideslip angles of 0^0 and -5^0 . Model forces and moments were measured by a six-component, water-cooled, strain-gage balance (LaRC 2019-A) which was mounted on a 20^0 bent sting. During the test program, the balance failed and was replaced by a similar balance (LaRC 2019-C). All tests were made with a speed brake deflection of 55^0 . Model base pressures were not measured. The complete

test program is presented in table II. This investigation was initiated in June 1974 and had a tunnel occupancy time of 32 hours,

DATA REDUCTION

Aerodynamic coefficients based on body and stability axes systems (fig. 3) were calculated using the following reference values:

S = total wing planform area = $.025 \text{ m}^2 (.2690 \text{ ft}^2)$

 \bar{c} = wing mean aerodynamic chord = .121 m (4.748 in)

b = wing span = .238 m (9.367 in)

All moment coefficients were referenced about the center-of-gravity located at 65 percent of reference body length which corresponds to a point 0.213 m (8.417 in) aft of the nose and .032 m (1.26 in) below the fuselage top surface.

Estimated inaccuracies in the body-axis coefficients are based on \pm 0.5 percent of the design loads for the 2019 balances. These inaccuracies expressed in coefficient form for the test free-stream dynamic pressure of 6890 N/m² (1.0 psia) are:

 $C_N \pm .0090$

 $C_A \pm .0019$

 $C_{\rm m} \pm .0019$

 $c_{1} + .0002$

 $C_n \pm .0004$

 $C_v \pm .0032$

PRESENTATION OF RESULTS

The longitudinal characteristics of the modified configurations at elevon/body-flap deflections of $10^{\rm O}/16.3^{\rm O}$ and $-40^{\rm O}/-11.7^{\rm O}$ are presented in figures 4 through 9. Data on the baseline 140 A/B orbiter model are also included for comparative purposes. Test results obtained at intermediate control deflections are also presented for the baseline orbiter (fig. 10) and two modified configurations, one having the C3 canard trimmer (fig. 11) and the other having the S2 fillet (fig. 12).

The lateral-directional characteristics for the various modified configurations are presented in figures 13 through 18 and include data for the baseline orbiter model. Tabulations of the measured coefficients are presented in the Appendix.

DISCUSSION OF RESULTS

The effects of the various modifications on the trim capability for extended c.g. locations were determined for an operational angle of attack of 30° . For the forward c.g. trim condition ($\delta_{\rm e}/\delta_{\rm BF}=-40^{\circ}/-11.7^{\circ}$), a $\Delta C_{\rm m}$ margin of -0.02 was used to account for any anomalies that might occur with the controls set at their maximum values. For the aft c.g. trim condition ($\delta_{\rm e}/\delta_{\rm BF}=10^{\circ}/16.3^{\circ}$), a $\Delta C_{\rm m}$ margin was not required since the controls are not set at the maximum values.

Tabulations of the maximum trimmable c.g. locations resulting from the modifications tested in this investigation are presented below.

	Center of Gravity, % &						
Configuration Modifications	Forward (∆C _m =02)	$ \begin{array}{c} Aft \\ (\Delta C_{m} = 0) \end{array} $					
None (Baseline)	63.9	68.0					
B2	63.5	67.7					
В4	62.9	67.1					
C3	61.9	66.0					
C4	61.1	65.4					
S1	62.8	66.9					
S2	61.6	65.8					
B2 C3	61.6	65.8					
B2 S2	61.4	65.6					
SO removed		69.7					

These results indicate that all modifications shifted the trim c.g. locations forward with the exception of the configuration which had the fillet removed, as expected. The canard trimmer C4 provided the largest c.g. shift (2.8 percent of body length) while the fillet S2 yielded a 2.3 percent extension. The oversized forebody B4 resulted in a shift of only 1.0 percent. The forebody B2 which was incorporated on three configurations, produced the smallest average c.g. shift of 0.4 percent. This small effect was due to the relative ineffectiveness of the canted forebody at the higher angles of attack. (See fig. 5 on page 41.) The results also indicate that positive static stability existed at both the forward and aft c.g. locations for all configurations tested. These results were determined by rotating the axis on the $\rm C_m$ vs $\rm C_N$ plots for each test configuration.

In general, the modified configurations had only small effects on the lateral-directional characteristics for a constant c.g. location of 65

percent of body length. The modified forebody, B4, did exhibit some improvement in directional stability (DCYNDB) as shown in figure 13 on page 97.

REFERENCES

1. Schaefer, William T., Jr.: Characteristics of Major Active Wind Tunnels at the Langley Research Center. NASA TM X-1130, 1965.

TABLE I.-COMPONENT DIMENSIONAL DATA

COMPONENT- 800Y- 826
GENERAL DESCRIPTION- CONFIGURATION 140A/B ORBITER FUSELAGE, B26 IS IDENTICAL TO 824 EXCEPT THE UNDER SIDE OF THE FUSELAGE HAS BEEN REFAIRED TO ACCEPT W116. MODEL SCALE- 0.010
DRAWING NUMBERS- SS-A00147 RELEASE 12. VL7-000143B, VL7-000200. VL7-000205. VL7-006089. VL7-000145. VL70-000140A. VL70-000140B.
TEST IDENTIFICATION- LA47

		FULL SCALE		FULL SCALE		MODEL SCALE		MODEL SCALE	
		METRIC		ENGLISH		METRIC		ENGLISH	
*	LENGTH OML FYD STA X0=235 LENGTH IML FYD STA X0=238 MAX YIDTH X0=1528.3 MAX DEPTH X0=1464 FINENESS RATIO MAX CROSS-SECTIONAL AREA	3284.99 3277.37 670.56 635.00 4.899 31.6689	CM. CM. CH. CH.	1293.30 1290.30 264.00 250.00 4.899 340.8800	IN. IN. IN. IN. SQ.FT.	32.850 32.774 6.706 6.350 4.899 31.6689	CH. CH. CH. CH.	12.933 12.903 2.640 2.500 4.899 4.9087	IN. IN. IN. SQ.IN.

^{*}Vehicle reference length (ℓ) is measured from the inner mold line value of XO = 238 which is 7.62 cm (full scale) behind the vehicle nose.

COMPONENT- CANOPY- C9
GENERAL DESCRIPTION- CONFIGURATION 3A. CANOPY USED WITH FUSELAGE B26.
MODEL SCALE- 0.010
DRAWING NUMBERS- SS-A00147 RELEASE 12. VL70-000143A.
TEST IDENTIFICATION- LA47

	FULL SCALE		FULL SCALE		MODEL SCALE		MODEL SCALE		
	METRIC		ENGLISH		METRIC		ENGLISH		
LENGTH X0=434.643 TO 578	364.127	CM.	143.357	IN.	3.641	CM.	1.434	IN.	
MAX WIDTH X0= 513.127	387.127	CM.	152.412	IN.	3.8 71	CM.	1.524	IN.	
MAX DEPTH X0= 485.0	63.500	CM.	25.000	IN.	.63 5	CM.	.250	IN.	

TABLE I.- Continued

COMPONENT- BODY FLAP- F10

GENERAL DESCRIPTION- CONFIGURATION 140C BODY FLAP. HINGELINE LOCATED AT XO= 1532. ZO= 287.

MODEL SCALE- 0.010

DRAWING NUMBERS- VL70-000140C. VL70-355114.

TEST IDENTIFICATION- LA47

	FULL SCALE		FULL SCALE		MODEL SCALE		MODEL SCALE	
	METRIC		ENGLISH		METRIC		ENGLISH	
LENGTH X0= 1525.5 TO 1613 MAX WIDTH AT L.E. X0=1525.5 MAX DEPTH X0= 1532	222.250	CH.	87.500	IN.	2.223	CH.	.875	IN.
	650.241	CH.	256.000	IN.	6.502	CH.	2.560	IN.
	50.287	CH.	19.793	IN.	.503	CH.	.198	IN.
AREAS MAX CROSS-SECT AT HINGELINE PLANFORM BASE AT X0= 1613	3.2690 12.5420 .4543	SQ.H.	35.1960 135.0000 4.8900	SQ.FT.	3.2698 12.5420 .4543		1.9440	SO.IN. SO.IN. SO.IN.

COMPONENT- OMS/RCS PODS- M7
GENERAL DESCRIPTION- CONFIGURATION 140A/B ORBITER OMS/RCS PODS.
MODEL SCALE- 0.010
DRAYING NUMBERS- SS-A00147 RELEASE 12. VL70-000145.
TEST IDENTIFICATION- LA47

	FULL SCALE		FULL SCALE		MODEL SCALE		MODEL SCALE	
	METRIC		ENGLISH		METRIC		ENGLISH	
LENGTH OMS FWD STA X0=1233.0	830.582	CM.	327.000	IN.	8.306	CM.	3.270	IN.
MAX WIDTH X0= 1450.0	240.030	CH.	94.500	IN.	2.400	CM.	.945	IN.
MAX DEPTH X0= 1493.0	276.861	CH.	109.000	IN.	2.769	CM.	1.090	IN.

TABLE I.- Continued

COMPONENT- WING- W116. MODEL SCALE- 0.010
GENERAL DESCRIPTION- CONFIGURATION 4. IDENTICAL TO W114 EXCEPT AIRFOIL THICKNESS
DIHEDRAL ANGLE IS ALONG TRAILING EDGE OF WING.
TEST IDENTIFICATION- LA47. DRAWING NUMBERS- VL70-000140A. VL70-00020.

	FULL SCALE METRIC	FULL SCALE ENGLISH	MODEL SCALE METRIC	MODEL SCALE ENGLISH
TOTAL DATA				
THEORETICAL PLANFORM AREA	249.9102 SQ.M.	2690.0000 SQ.FT.	249.9102 SQ.CM.	38.7360 SQ.IN.
THEORETICAL SPAN	2379.172 CM.	936.680 IN.	23.792 CM.	9.367 IN.
ASPECT RATIO	2.265	2.265	2.265	2.265
RATE OF TAPER	1.177	1.177	1.177	1.177
TAPER RATIO	.200	.200	.200	.200
THEORETICAL FEARFORD AREA THEORETICAL SPAN ASPECT RATIO RATE OF TAPER TAPER RATIO DIHEDRAL ANGLE INCIDENCE ANGLE	3.500 DEG.	3.500 DEG.	3.500 DEG.	3.500 DEG.
INCIDENCE ANGLE	.500 DEG.	.500 DEG.	.500 DEG.	.500 DEG.
AERODYNAMIC TWIST	3.000 DEG.	3.000 DEG.	3.000 DEG.	3.000 DEG.
		•		
SWEEP-BACK ANGLES LEADING EDGE TRAILING EDGE 0.25 FLEMENT LINE	45.000 DEG.	45.000 DEG.	45.000 DEG.	45.000 DEG.
TRAILING EDGE	-10.056 DEG.	-10.056 DEG.	-10.056 DEG.	-10.056 DEG.
0.25 ELEMENT LINE	35.209 DEG.	35.209 DEG.	35.209 DEG.	35.209 DEG.
CHORDS				
THEORETICAL ROOT	1750.67 CM.	689.24 IN.	17.51 CM.	6.89 IN.
THEORETICAL TIP	350.14 CM.	137.85 IN.	3.50 CM.	1.38 IN.
MAC	1206.02 CM.	474.81 IN.	12.06 CM.	4.75 IN.
FUS STA OF 0.25 MAC	2887.55 CM.	1136.83 IN.	28.88 CM.	11.37 IN.
W.P. OF 0.25 MAC	738.07 CM.	290.58 IN.	7.38 CM.	2.91 IN.
B.L. OF 0.25 MAC	462.61 CM.	182.13 IN.	4.63 CM.	1.82 IN.
EXPOSED DATA				
THEORETICAL AREA	162.7203 SQ.M.	1751.5000 SQ.FT.	162.7203 SQ.CM.	25.2216 SQ.IN.
THEORETICAL SPAN BP=108	1830.53 CM.	720.68 IN.	18.31 CM.	7.21 IN.
ASPECT RATIO	2.059	2.059	2.059	2.059
TAPER RATIO	.2450	.2450	.2450	.2450
CHORDS				
ROOT BP= 108		562.09 IN.	14.28 CM.	5.62 IN.
TIP 1.00 B/2	350.14 CM.	137.85 IN.	3.50 CM.	1.38 IN.
MAC	997.79 CM.	392.83 IN.	9.98 CM.	3.93 IN.
FUS STA OF 0.25 MAC	3012.40 CM.	1185.98 IN.	30.12 CM.	11.86 IN.
W.P. OF 0.25 MAC	747.52 CM.	294.30 IN.	7.48 CM.	2.94 IN.
B.L. OF 0.25 MAC	639.50 CM.	251.77 IN.	6.39 CM.	2.52 IN.
AIRFOIL SECTION				
ROOT B/2 = 0.425	.113	.113	.113	.113
TIP B/2 = 1.0	.120	.120	.120	.120
LEADING EDGE CUFF (2)	18 5148 88 #	113 1000 00 57	14 5110 60 69	1 0200 00 10
PLANFORM AREA		113.1800 SQ.FT.	10.5148 SQ.CM.	1.6298 SQ.IN.
INTERSECTS FUS ML 0 STA	1270.00 CM.	500.00 IN.	12.70 CM.	5.00 IN.
INTERSECTS WING AT STA	2600.97 CM.	1024.00 IN.	26.01 CM.	10.24 IN.

TABLE I.- Continued

COMPONENT- ELEYON- E26
GENERAL DESCRIPTION- CONFIGURATION 140A/B ORBITER ELEYONS. DATA IS FOR ONE SIDE.
MODEL SCALE- 0.010
DRAYING NUMBERS- VL70-000200. VL70-006089. VL70-006092.
TEST IDENTIFICATION- LA47

	FULL SCAL METRIC	E	FULL SCAL ENGLISH	E	MODEL SCA METRIC	ILE	MODEL SC/ ENGLISH	ILE
AREA EQUIVALENT SPAN INBOARD EQUIVALENT CHORD OUTBOARD EQUIVALENT CHORD RATIO MOVABLE SURFACE CHORD/ TOTAL SURFACE CHORD	19.5097 886.97 299.72 140.188	SO.M. CM. CH. CH.	210.0000 349.20 118.00 55.192	SO.FT. IN. IN. IN.	19.5097 8.87 3.00 1.402	SQ.CM. CH. CH. CH.	3.0240 3.49 1.18 .552	SO.IN. IN. IN. IN.
AT INBOARD EQUIVALENT CHORD AT OUTBOARD EQUIVALENT CHORD SWEEP-BACK ANGLES	.2096 .4004		.2096 .4004		.2096 .4004		.2096 .4004	
LEADING EDGE TAILING EDGE HINGELINE	.000 -10.056 .000	DEG. DEG. DEG.	.000 -10.956 .000	DEG. DEG. DEG.	.000 -10.056 .000	DEG. DEG. DEG.	.000 -10.056 .000	OEG. DEG. DEG.
AREA MOMENT PRODUCT OF AREA AND MAC MEAN AERODYNAMIC CHORD	44.9462 230.38	CU.M. CM.	1587.2500 90.70	CU.FT.	44.9462 2.30	CU.CM. CM.	2.7428 .91	CU.IN. IN.

TABLE I.- Continued

COMPONENT- VERTICAL TAIL- V8
GENERAL DESCRIPTION- CONFIGURATION 140C ORBITER VERTICAL TAIL, IDENTICAL TO CONFIGURATION 140A/B VERTICAL TAIL.
MODEL SCALE- 0.010
DRAWING NUMBERS- VL70-000140C, VL70-000146B.
TEST IDENTIFICATION- LA47

	FULL SCALE METRIC	FULL SCALE ENGLISH	MODEL SCALE METRIC	MODEL SCALE ENGLISH
THEORETICAL AREA THEORETICAL SPAN ASPECT RATIO RATE OF TAPER TAPER RATIO SWEEP-BACK ANGLES	38.3926 SO.M.	413.2530 SQ.FT.	38.3926 SO.CM.	5.9508 SQ.IN.
	801.93 CM.	315.72 IN.	8.02 CM.	3.16 IN.
	1.675	1.675	1.675	1.675
	.507	.507	.507	.507
	.404	.404	.404	.404
LEADING EDGE TRAILING EDGE 0.25 ELEMENT LINE CHORDS	45.00 DEG.	45.00 DEG.	45.00 DEG.	45.00 DEG.
	26.25 DEG.	26.25 DEG.	26.25 DEG.	26.25 DEG.
	41.13 DEG.	41.13 DEG.	41.13 DEG.	41.13 DEG.
THEORETICAL ROOT THEORETICAL TIP MAC FUS STA OF 0.25 MAC N.B. OF 0.25 MAC	681.99 CM.	268.50 IN.	6.82 CM.	2.69 IN.
	275.51 CM.	108.47 IN.	2.76 CM.	1.08 IN.
	507.52 CM.	199.81 IN.	5.08 CM.	2.00 IN.
	3716.92 CM.	1463.35 IN.	37.17 CM.	14.63 IN.
	1614.22 CM.	635.52 IN.	16.14 CM.	6.36 IN.
B.L. OF 0.25 MAC AIRFOIL SECTION LEADING WEDGE ANGLE TRAILING WEDGE ANGLE LEADING EDGE RADIUS VOID AREA BLANKETED AREA	.00 CM. 10.00 DEG. 14.92 DEG. 5.08 CM. 1.2235 SO.M.		.00 CM. 10.00 DEG. 14.92 DEG05 CM. 1.2235 SQ.CM0000 SQ.CM.	.00 IN. 10.00 DEG. 14.92 DEG02 IN1896 SQ.IN0000 SQ.IN.

TABLE I.- Concluded

COMPONENT- RUDDER- R5
GENERAL DESCRIPTION- CONFIGURATION 140C ORBITER RUDDER. IDENTICAL TO THE CONFIGURATION 140A/B RUDDER.
MODEL SCALE- 0.010
DRAWING NUMBERS- VL70-000146B. VL70-00095.
TEST IDENTIFICATION- LA47

	FULL SCAL METRIC	E	FULL SCA ENGLISH		MODEL SCA METRIC	NLE	MODEL SC ENGLISH	ALE
AREA EQUIVALENT SPAN INBOARD EQUIVALENT CHORD OUTBOARD EQUIVALENT CHORD RATIO MOVABLE SURFACE CHORD/ TOTAL SURFACE CHORD	9.304	SQ.M.	100.150	SQ.FT.	.0009	SQ.M.	.0100	SO.FT.
	510.54	CM.	201.00	IN.	5.11	CM.	2.01	IN.
	232.626	CM.	91.585	IN.	2.326	CM.	.916	IN.
	129.116	CH.	50.833	IN.	1.291	CM.	.508	IN.
AT INBOARD EQUIVALENT CHORD AT OUTBOARD EQUIVALENT CHORD SWEEP-BACK ANGLES	.400 .400		.400 .400		.400 .400		.400 .400	
TAILING EDGE HINGELINE AREA MOMENT	26.25	DEG.	26.25	DEG.	26.25	DEG.	26.25	DEG.
	34.83	DEG.	34.83	DEG.	34.83	DEG.	34.83	DEG.
PRODUCT OF AREA AND MAC	17.2994	CU.M.	610.9200	CU.FT.	17.2994	CU.CM.	1.0557	CU.IN.
MEAN AERODYNAMIC CHORD	1 85. 93	CM.	73.20	IN.	1.86	CM.	.73	

TABLE II

TEST:	CFHT 104 (LA-47)	DATA		MBER (SET RUN NUMBER COLLATION SUMMARY	DATE:	11/74		
· DATA SET	CONFIGURATION	ᆉ		ARAME	PARAMETERS/VALUES	ġir.		NUMBERS	
2 2 3 3 4 4 7	r	αβ	γe	SSB &	SBF	RUNS	10.3		-
кнн001	BASELINE 140A/B	A 0	0	55	0		33		
05			0	<u> </u>	11.7		34		
03		0	0		16.3		35		-
04		0	10	1	16.3		36		
05		-5	10	Ι	16.3		37		
90		0	-20	-1	11.7		07		T
07		0	640	-1	11.7		38		.51
80	\	-5	-40		11.7		39		RUN
60	140A/B -SO	0	10		16.3		81		NU
10	\	0	10	1	16.3		82		ALL
11	. 140A/B +S2	0	0	-1	11.7		92		
12	_	0	10	1	16.3		41		
13		-5	10		16.3		42		
14		0	-20	-1	11.7		75		
15		0	H-40		11.7		43		
16	>	-5	P-40	-	11.7		77		
17	140A/B +S1	0	10		16.3		62		
√ 18	<u> </u>	∀ -5	10	V 1	16.3		80		
	13	<u>\$</u> ?	31	37	54	u)	£ 1		
4 4 4				4 4 4		111111	1		7
ა ზ	β A) 12 ⁰ ,16 ^c	,20°,24°,28°,	,32°,360 FFF	الما			T. AR (T)	12, 69, 2	ù
CCHEDULES									

TEST: CI	CFHT 104 (LA-47)		DATA	SET	N NUMBE	RUN NUMBER COLLATION SUMMARY	ON SUMMARY	70	DATE:	11/74		
DATA SET		SC	SCHD.		PAR	PARAMETĒRS/VALUES	JES		o z	MACH	MACH NUMBERS	
IDENTIFIER	CONFIGURATION	۵	β	H	δe δSB	B SBF		u l	RUNS	10.	3	П
RHH019	140A/B + S1	Ą	0		-40 5.	5 -11.7				77		
7			-5			-11.7				78		
21	140A/B + C3		0		0	-11.7				73		
22			0		10	16.3				74	,	
23			-5		10	16.3				48	3	
24			0		07-	-11.7				45	9	
25	>		-5		07-	-11.7				97	9	
26	140A/B + C4		0		10	16.3				29		
27			-5		10	16.3				89	8	
28			0		07-	-11.7				69	6	BEF
29	>		-5		07-	-11.7				70	0	
30	B2 replaces B26		0		10	16.3				67	6	
31			-5		10	16.3				50	0	
32			0		07-	-11.7				55	9	
33	\		-5		07-	-11.7				26	5	
34	B2 S2 replaces B26S0		0		10	16.3				59	9	
V 35	<u> </u>	\wedge	-5		10	16.3				09	0	
1	13 19		25	31	37	43	49	55	6.1		67	75 76
1111		1		1	1 1 1 1	444444		4 4 4 4	4	4 4 4	4444	-
i.				ŏ	OEFFICENT	5 L			_	DVAR (1)	IE . AR (2)	70H G
מ אין דיין אין דיין אין דיין דיין דיין די	2					1						1

TABLE II.- Concluded

A 0 Ce CSB CSB CSB 10.3 10.3 10.3 10.3 10.3		DATA SET RUN NUMBER ÇOLLATION SUMMARY SCHD.	: 11/74
B2650 A 0	CONFIGURATION	B Se SSB	NO. MACH NUMBERS
1-5	B26S0	0 -40 55	
10 16.3 10 10 10 10 10 10 10 1		-40 -11.	58
10 16.3 62 71 71 71 72 72 72 73 74 74 74 74 74 74 74	(replaces B26)+C3	16 16	61
0		10	62
1-5		-40	71
16.3 16.3 16.3 15.3 16.3		07-	
-5	replaces B26	10	
0		10	
		-40 -11	
25 31 37 43 69 61 67 77 76 61 67 77 62 61 67 77 62 61 67 67 77 62 61 67 67 67 67 67 67 67 67 67 67 67 67 67	->	-5 -40 V -11.	
25 31 37 43 43 55 61 67 77 72 10.7 AP 121 7			85
25 31 37 43 42 55 51 67 77 77 78 79 10 10 10 10 10 10 10 10 10 10 10 10 10			
25 31 37 43 55 61 67 7 COEFFICENTS 10:yabill (C.Abbi2)			
25 31 37 43 49 55 61 67 7 COEFFICENTS (CYARII) (CYARII) (CYARIII) (CYARIIII) (CYARIII) (CYARIIII) (CYARIII) (CYARIII) (CYARIII) (CYARIII) (CYARIII) (CYARIIII) (CYARIII) (CYARIIII) (CYARIIIIII) (CYARIIII) (CYARIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			
25 31 37 43 55 61 67 7 7 11 11 11 11 11 11 11 11 11 11 11 1			
25 31 37 43 55 61 67 7 7 COEFFICENTS (COEFFICENTS) (C.AB) (C.AB) (C.AB)			
25 31 37 43 55 61 67 7 7 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1			
25 31 37 43 49 55 61 67 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
COEFFICENTS (Cyarin Court Cour	19	31 37 43	51 67 7
EFFICENTS (C.AR.1) (C.AR.1)	4114		
		EFFICENT	VAR (1) (C) AB (2)

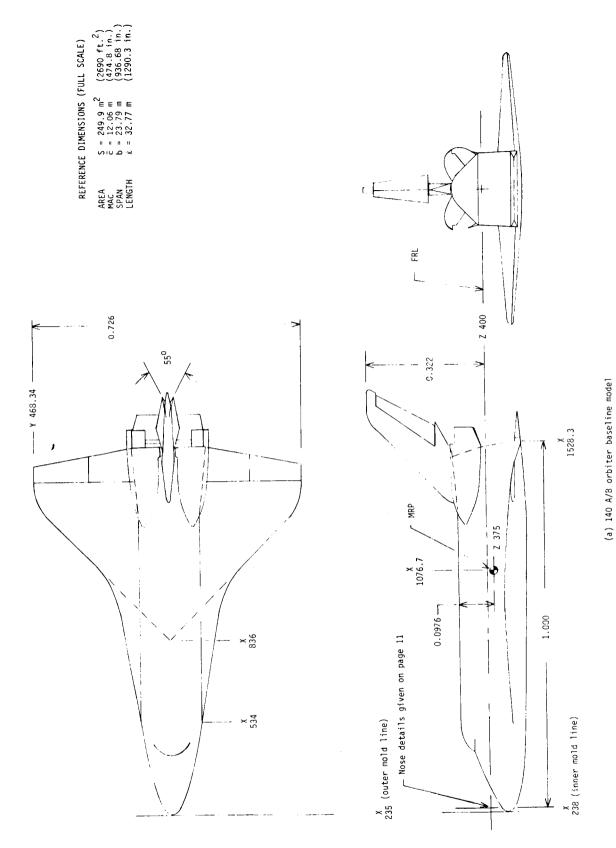
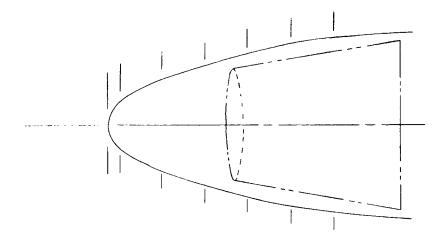
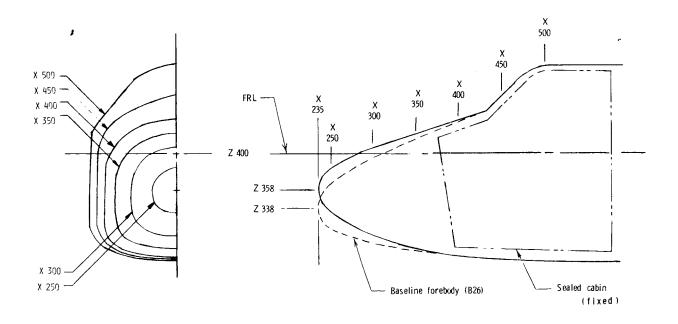


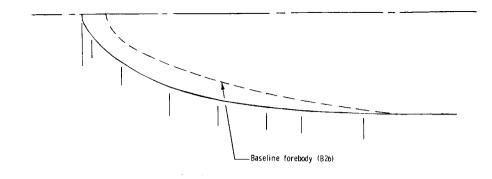
Figure 1.- Sketches of baseline orbiter and model modifications. Full scale station locations, \mathbf{x} , \mathbf{y} , and \mathbf{z} and \mathbf{z} are indicated in inches. Other geometric dimensions are normalized by reference length, β .

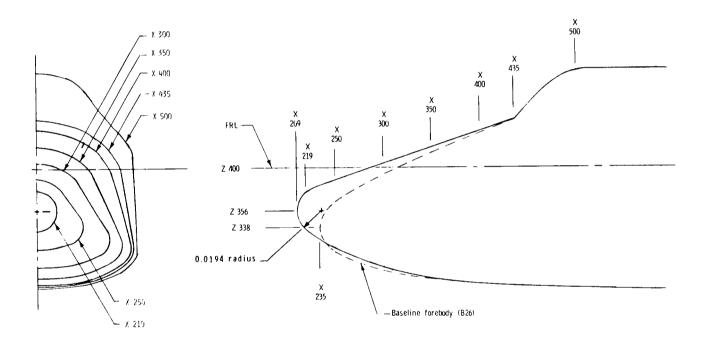




(b) Forebody modification B2

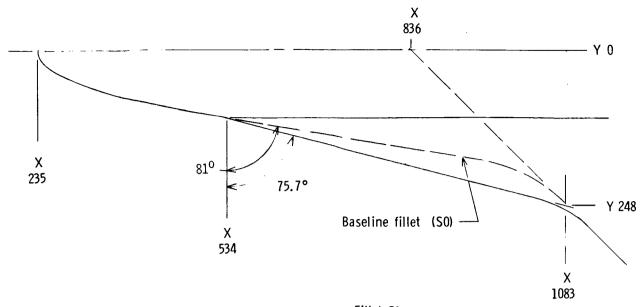
Figure 1. - Continued.



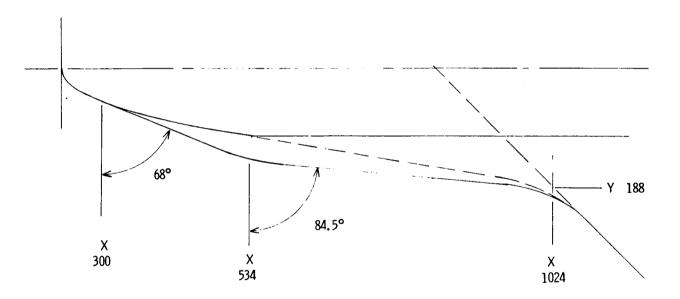


(c) Forebody modification B4

Figure 1. - Continued.



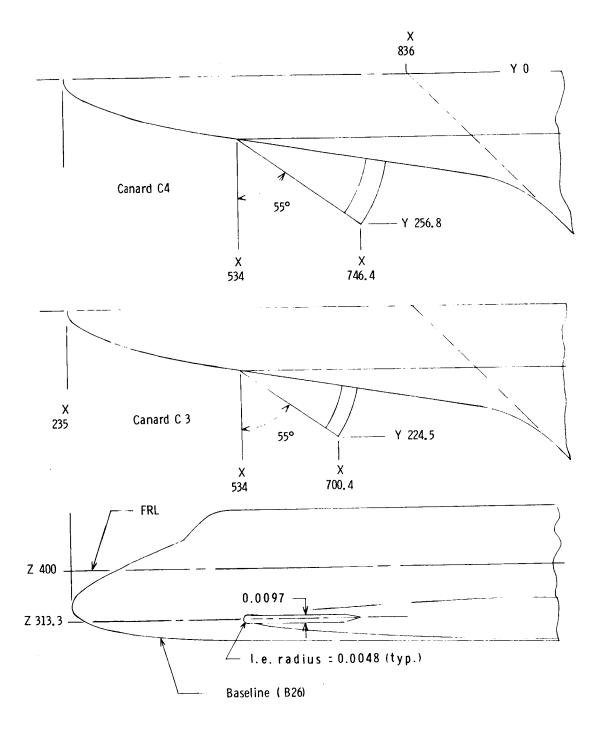
Fillet S1



Fillet S2

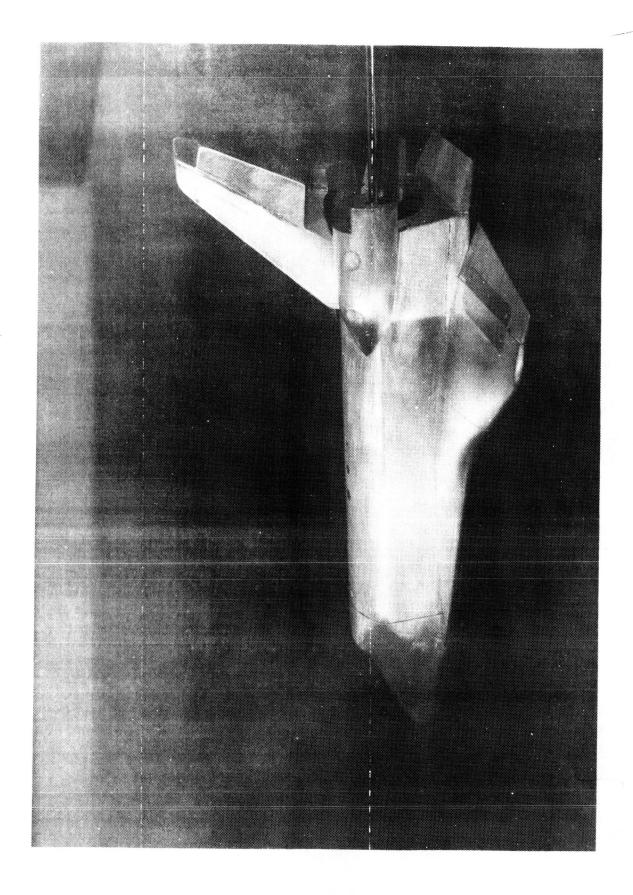
(d) Wing - body fillets

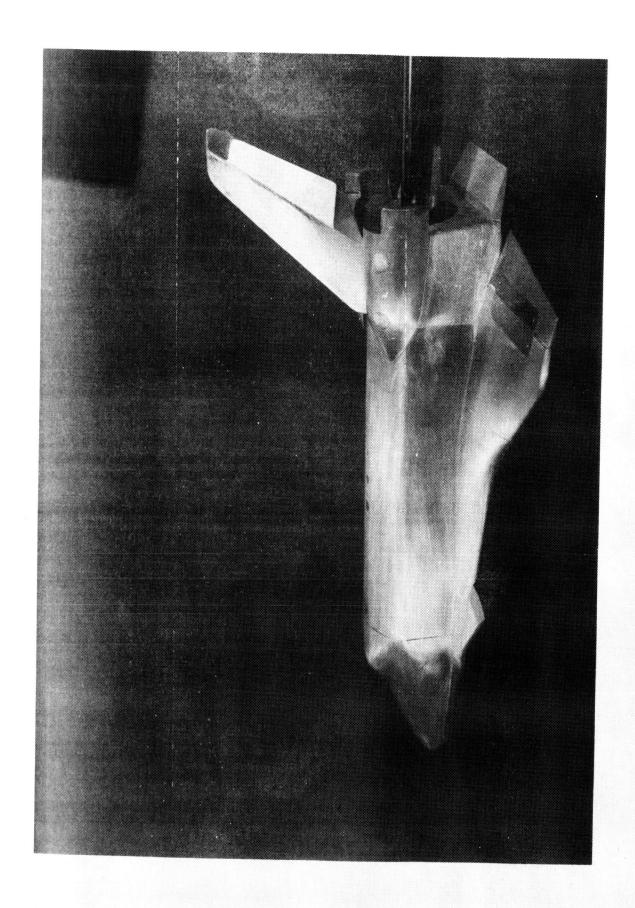
Figure 1. - Continued.



(e) Canard trimmers

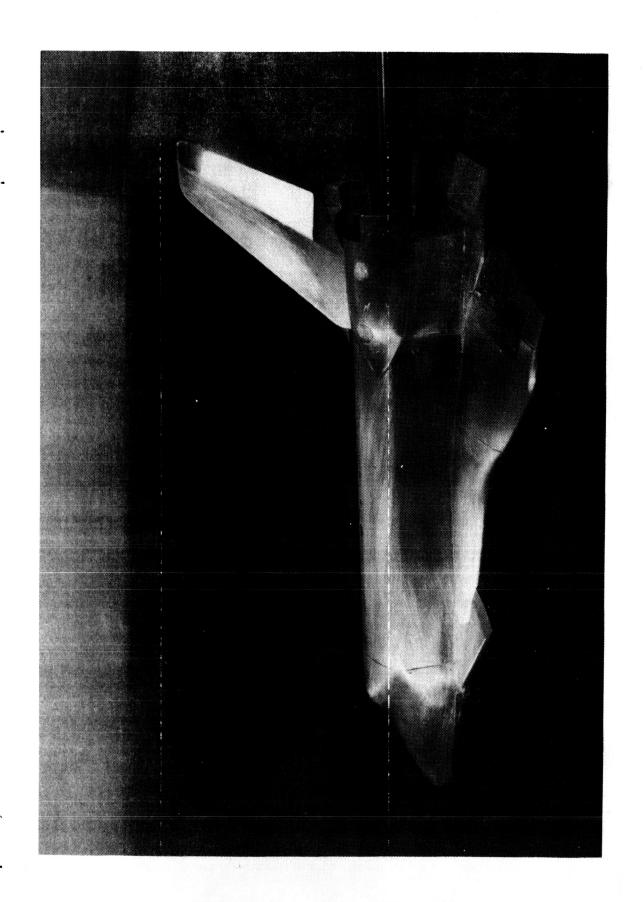
Figure 1. - Concluded.



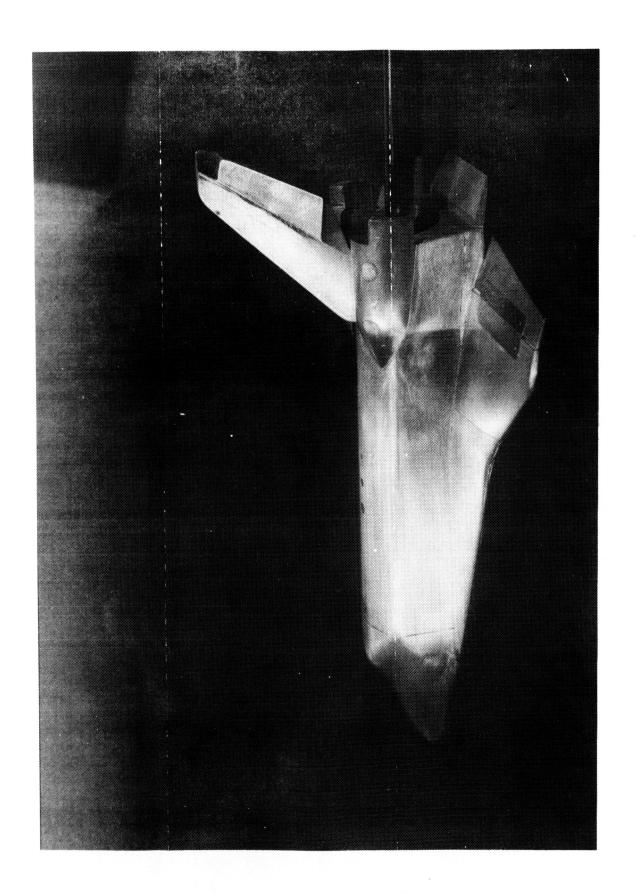


(b) Modified model with C3 canard trimmer

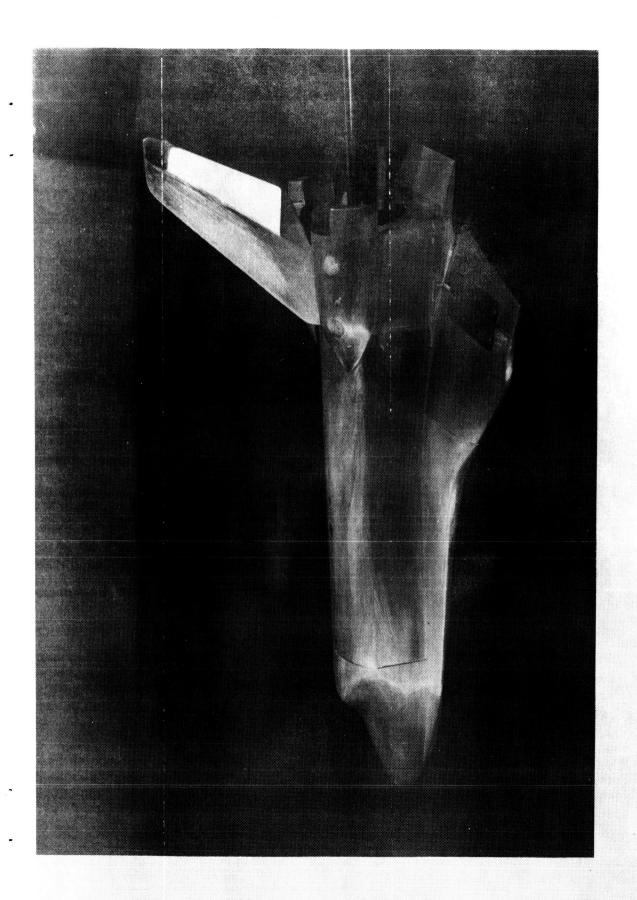
Figure 2.- Continued.



(c) Modified model with C4 canard trimmer

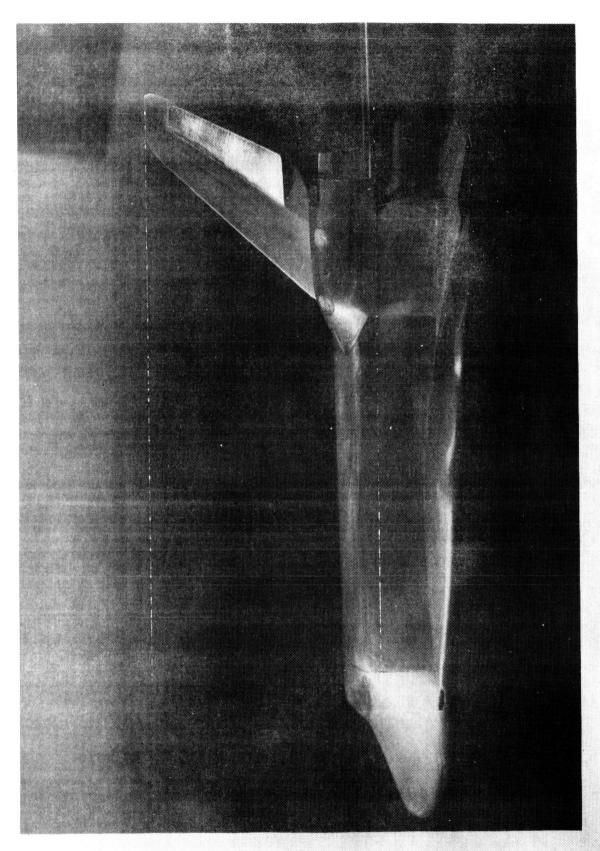


(d) Modified model with SI fillet



(e) Modified model with B2 forebody and S2 fillet

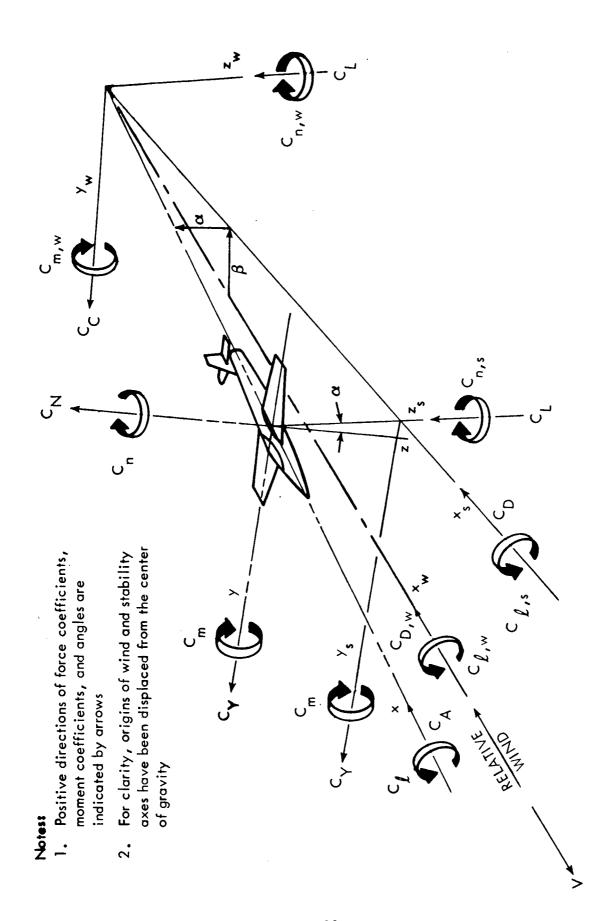
Figure 2.- Continued.



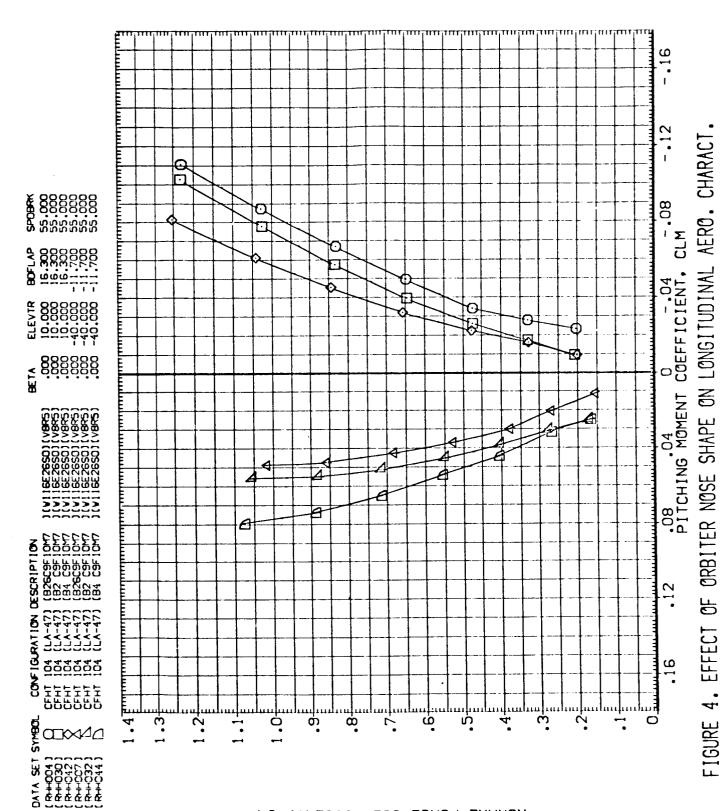
(f) Modified model with B4 forebody

(g) Modified model with fillet removed

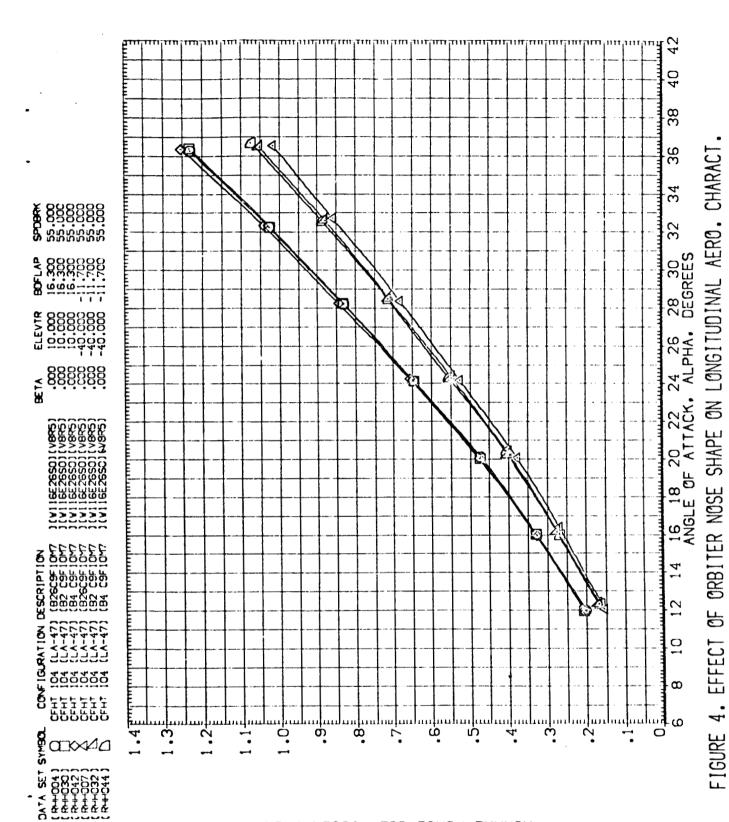
Figure 2.- Concluded.



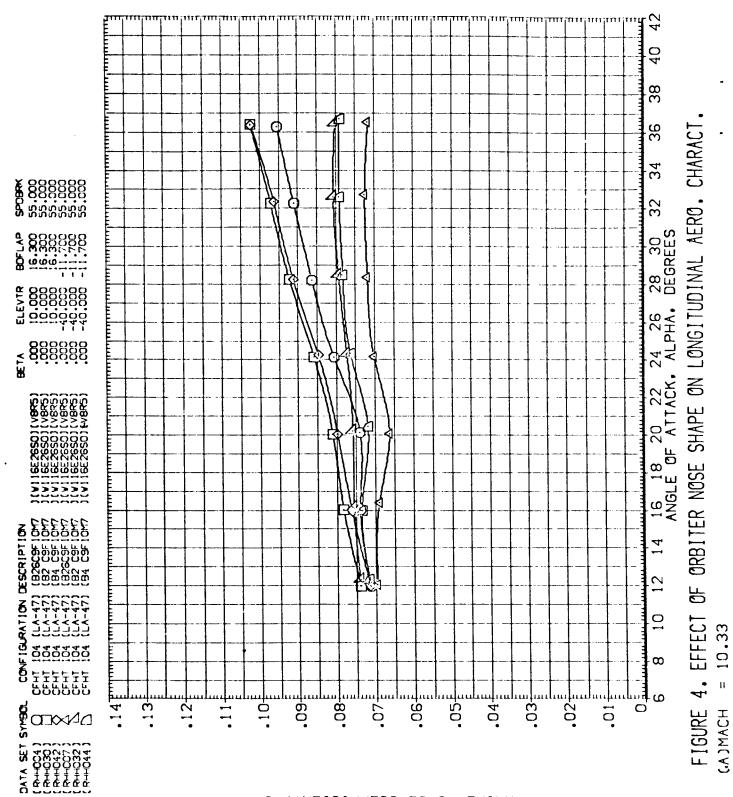
DATA FIGURES



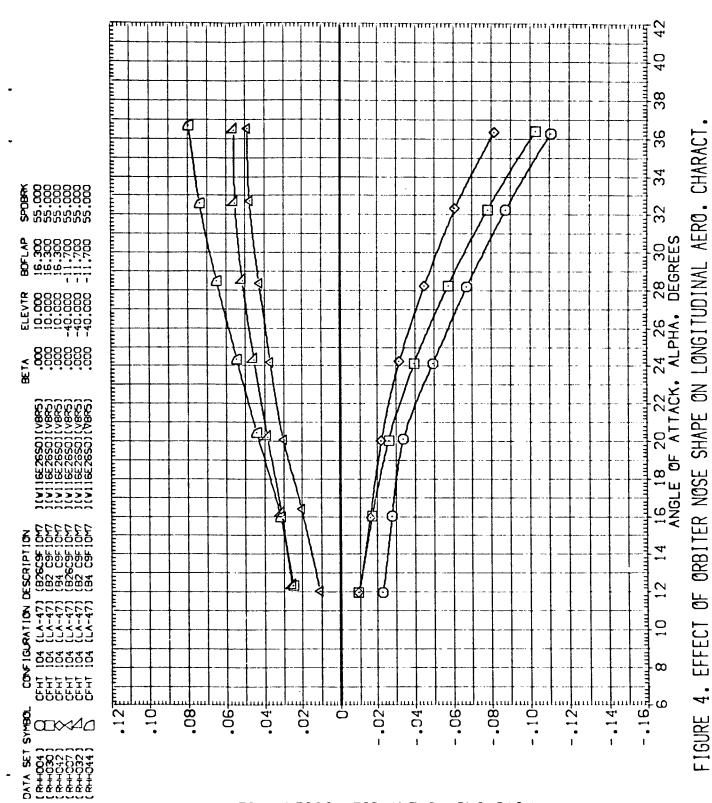
NORMAL FORCE COEFFICIENT, CN



NORMAL FORCE COEFFICIENT, CM

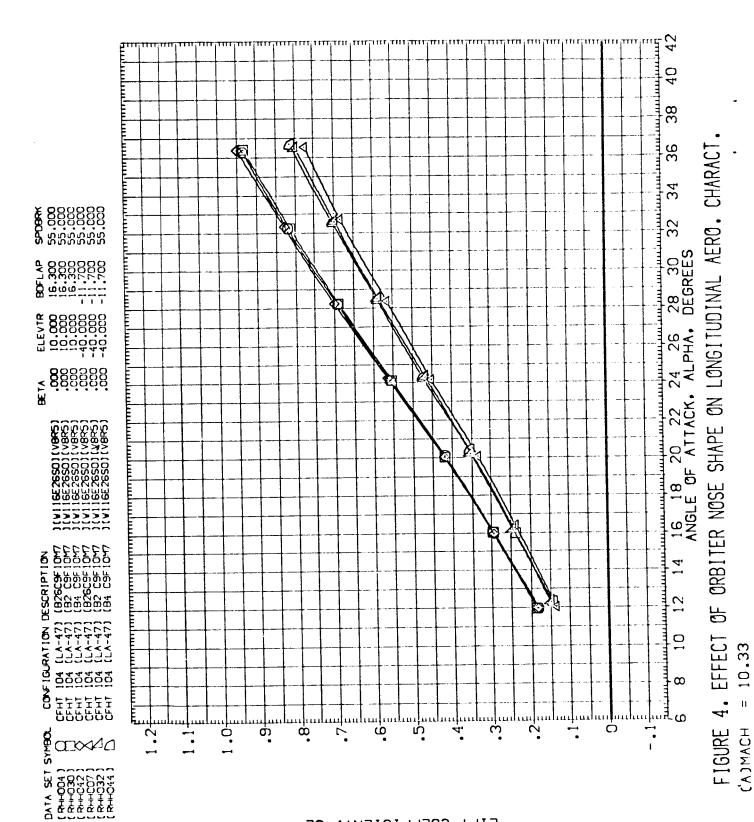


AXIAL FORCE COEFFICIENT, CA

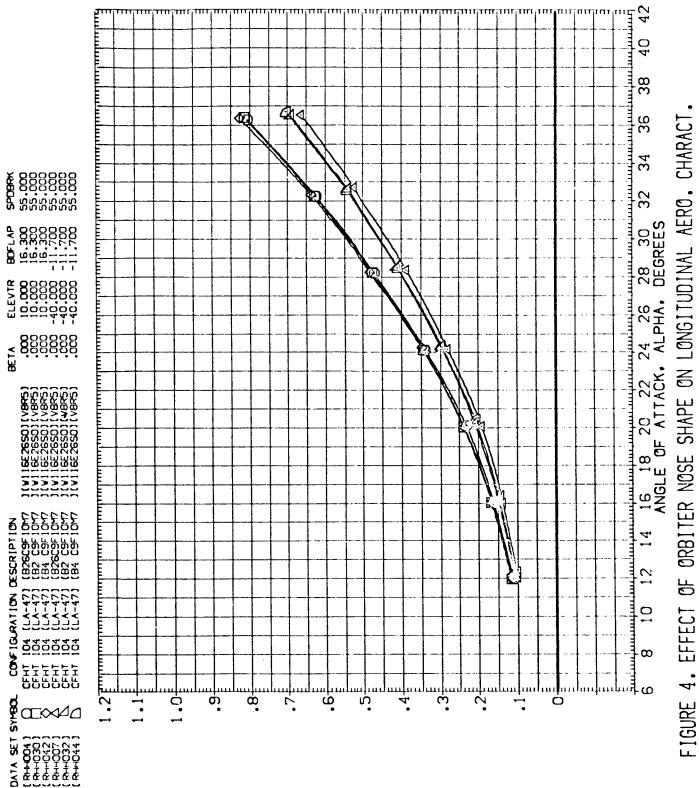


PITCHING MOMENT COEFFICIENT, CLM

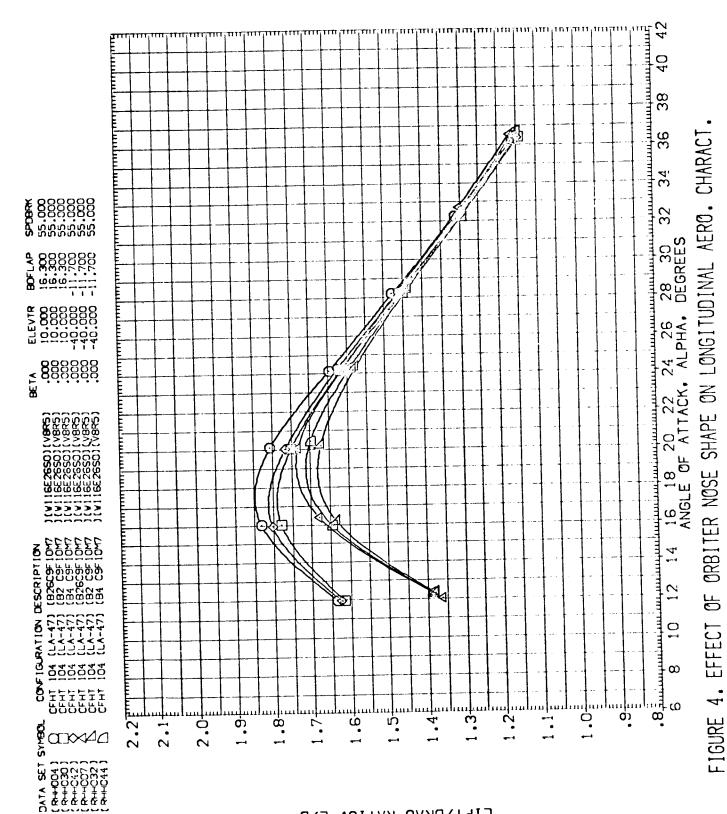
CA 3 MACH



LIFT COEFFICIENT.

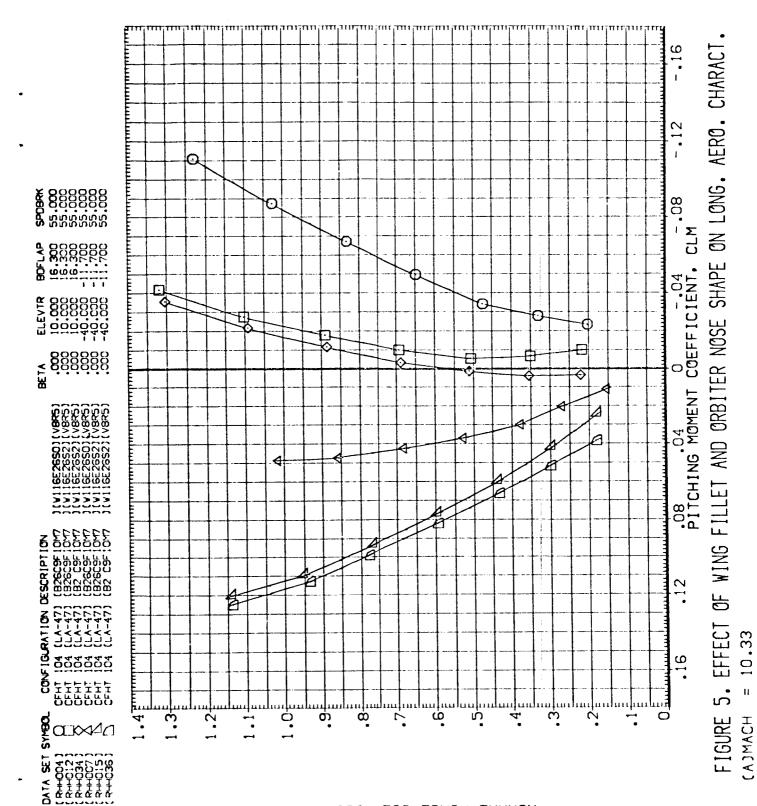


DRAG COEFFICIENT, CD

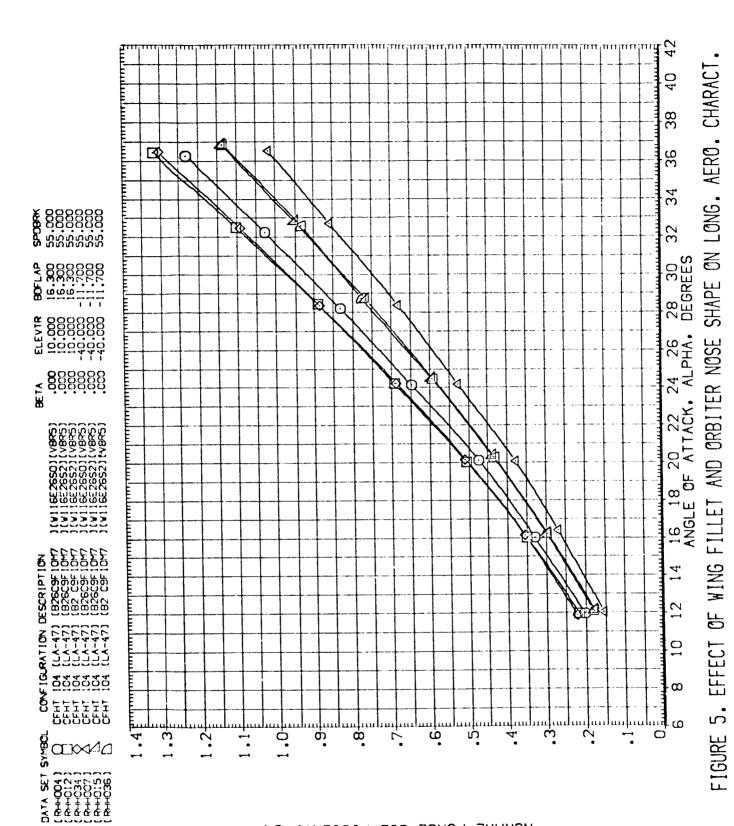


LIFT/DRAG RATIO. L/D

CAJMACH



NORMAL FORCE COEFFICIENT, CM



NORMAL FORCE COEFFICIENT, CM

AXIAL FORCE COEFFICIENT.

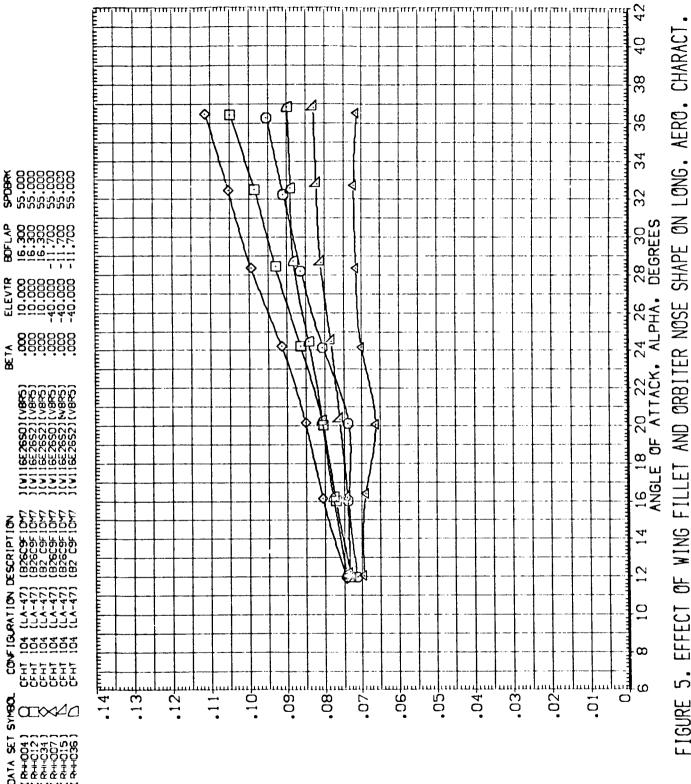
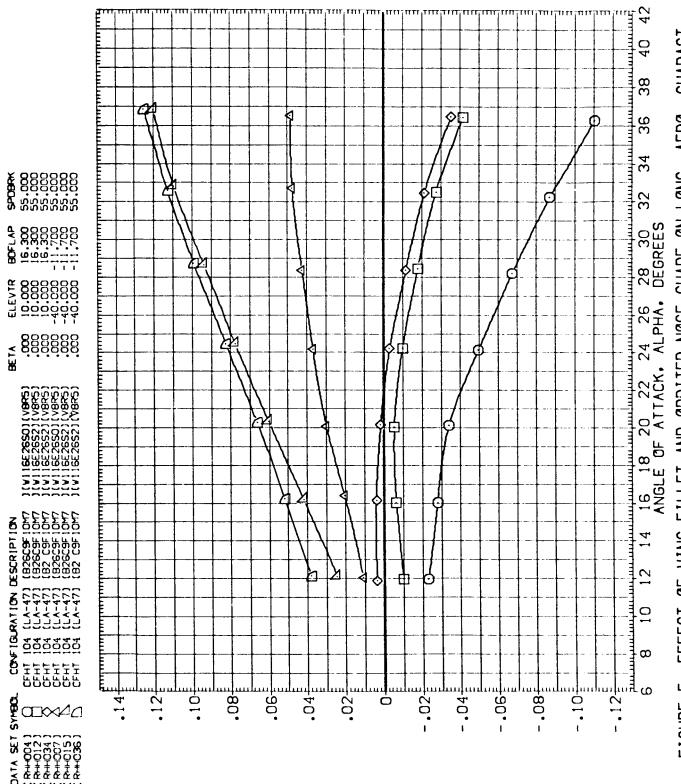
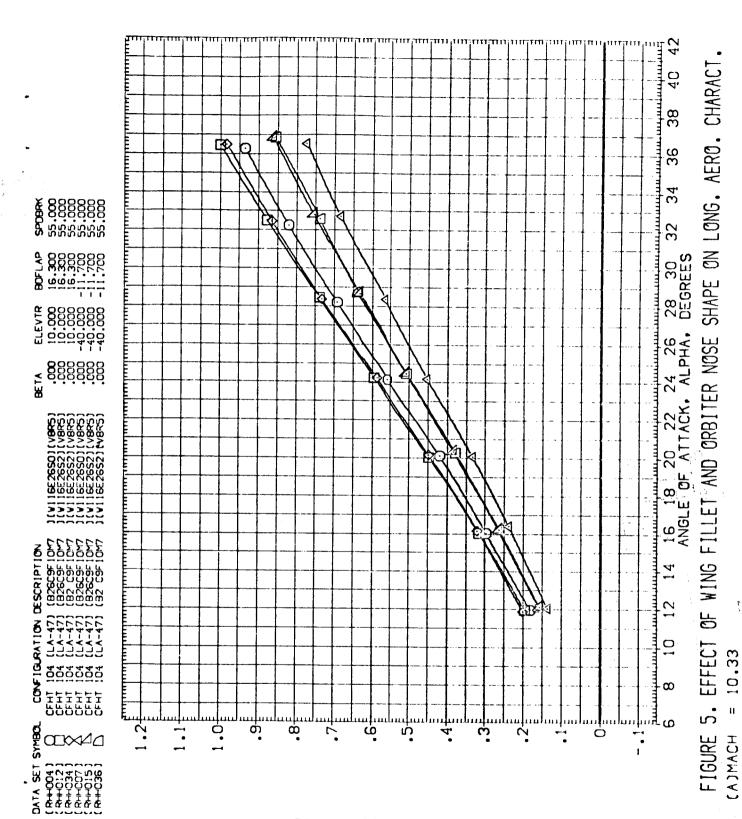


FIGURE 5. EFFECT OF WING FILLET AND ORBITER NOSE



SHAPE ON LONG. AERO. CHARACT FILLET AND ORBITER NOSE 10,33 ۍ. FIGURE (A.) MACH

PITCHING MOMENT COEFFICIENT, CLM



LIFT COEFFICIENT, CL

DRAG COEFFICIENT, CD

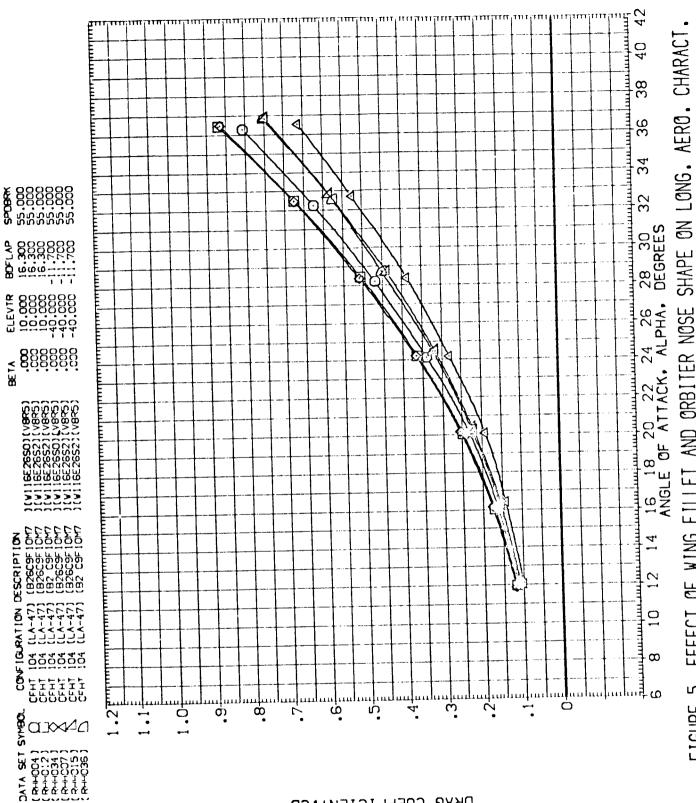
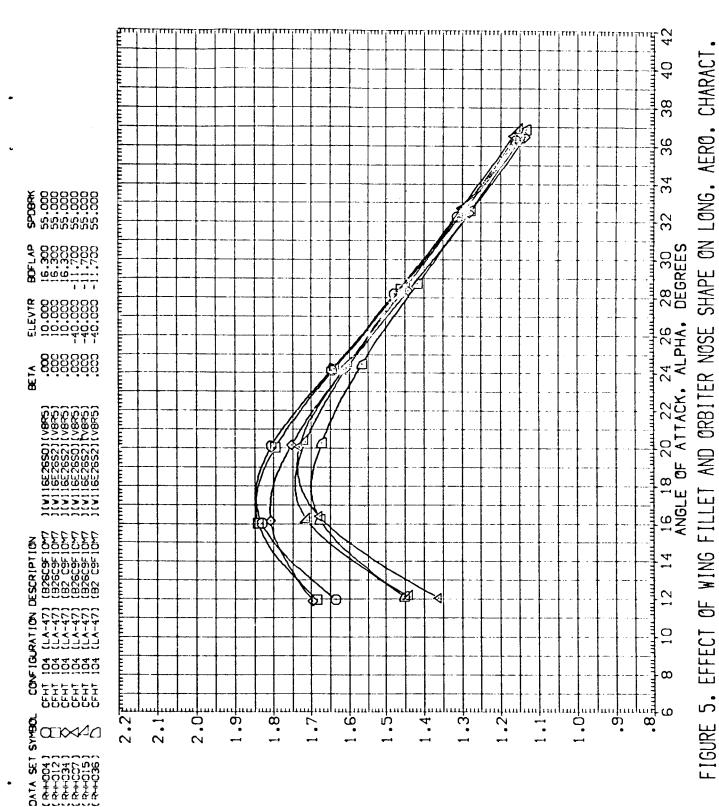
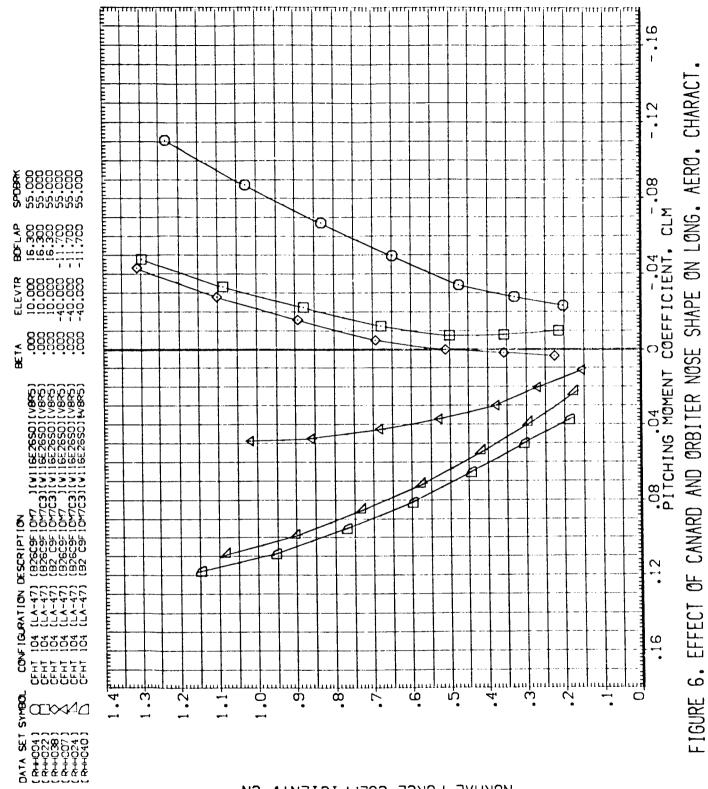


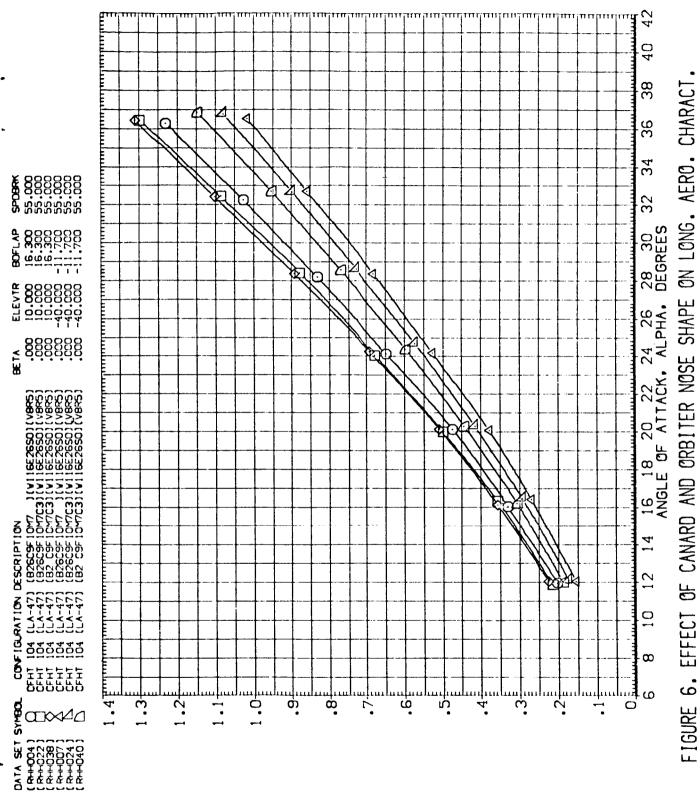
FIGURE 5. EFFECT OF WING FILLET AND ORBITER NOSE



LIFT/DRAG RATIO, L/D

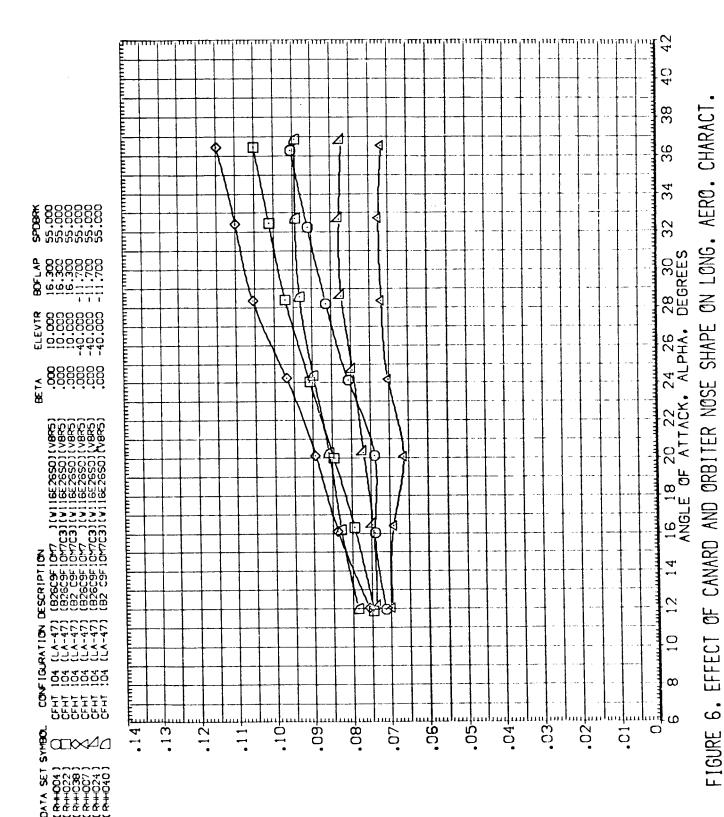


NORMAL FORCE COEFFICIENT, CN



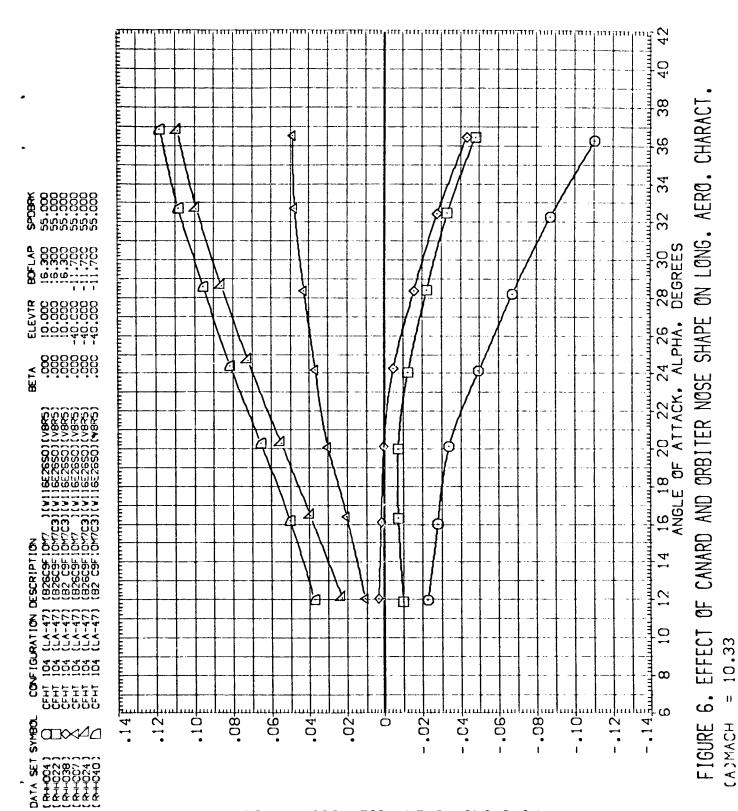
NORMAL FORCE COEFFICIENT, CM

10,33



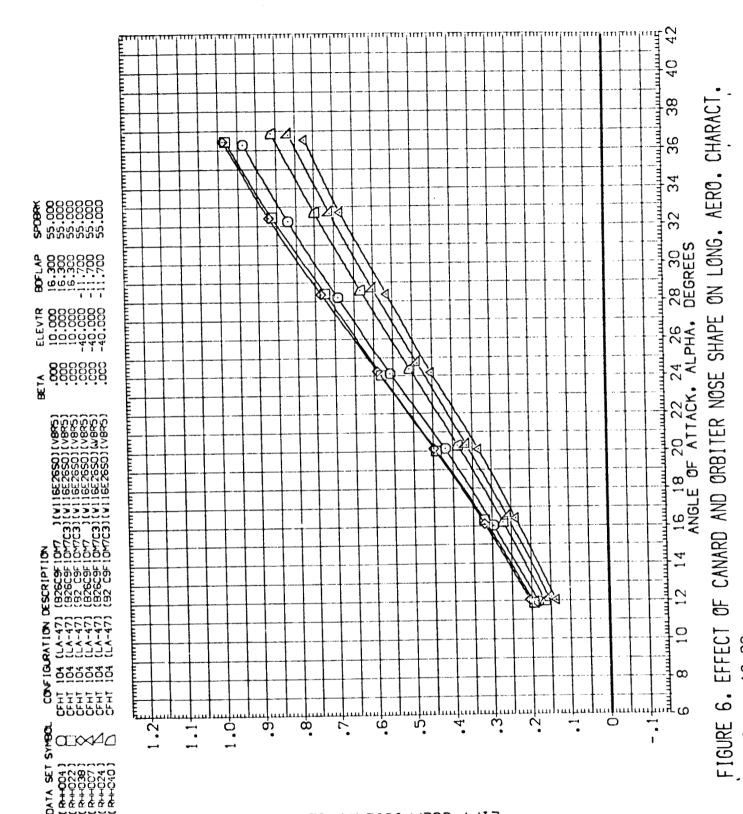
AXIAL FORCE COEFFICIENT, CA

6 A J M A C H

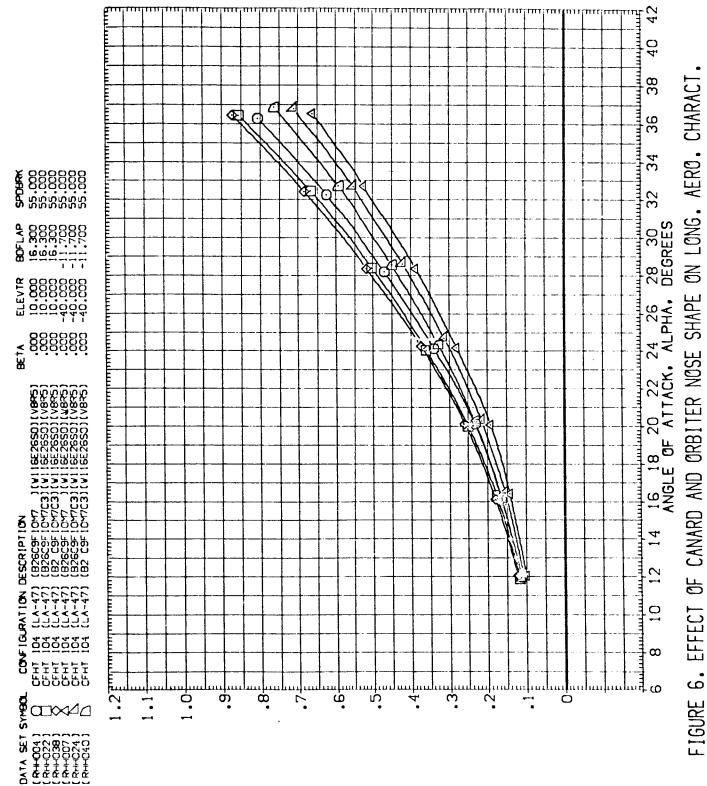


PITCHING MOMENT COEFFICIENT, CLM

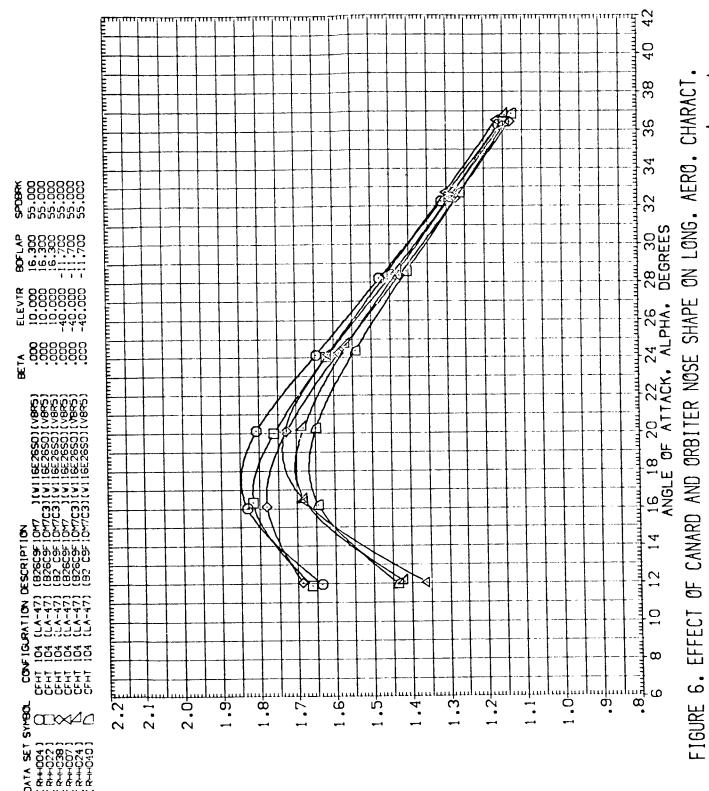
CAUMACH



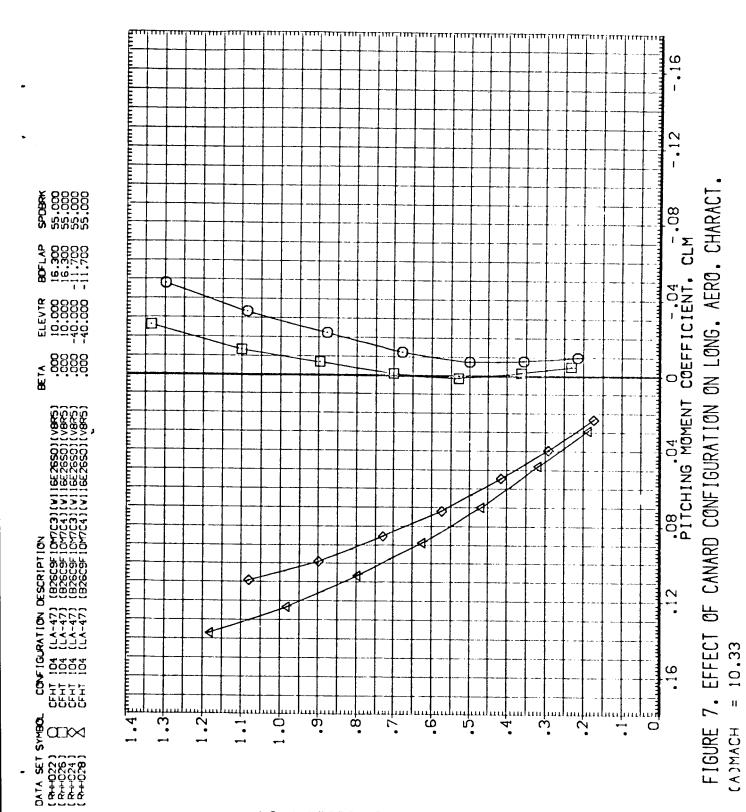
LIFT COEFFICIENT, CL



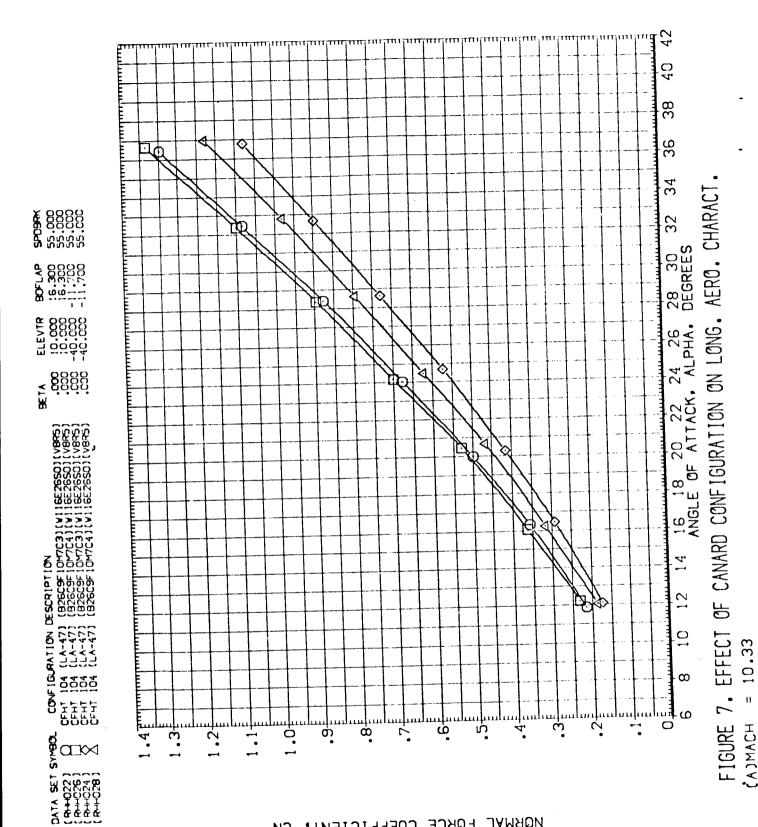
DRAG COEFFICIENT, CD



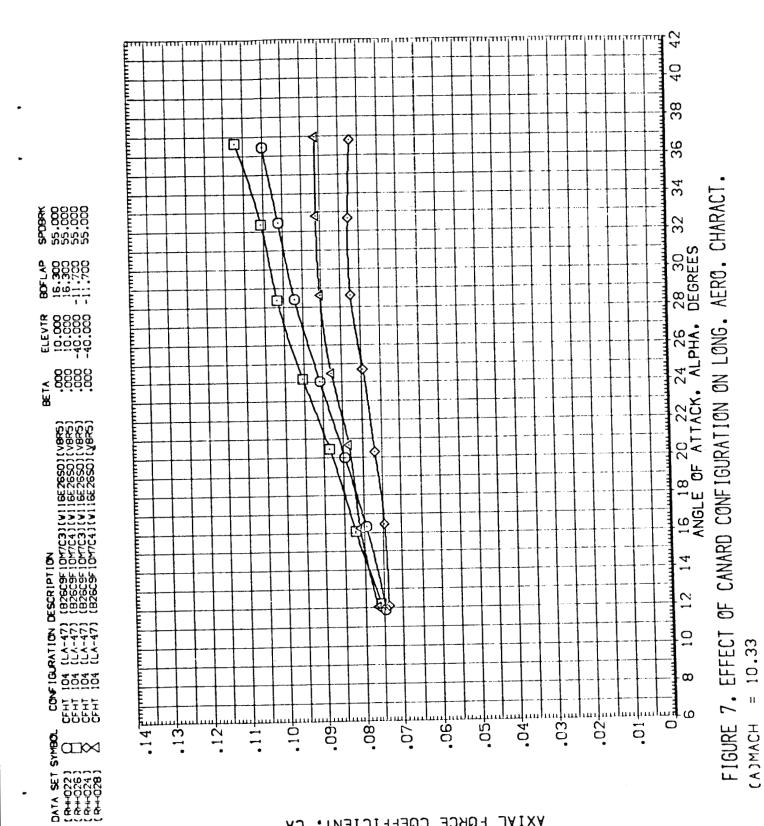
LIFT/DRAG RATIO. L/D



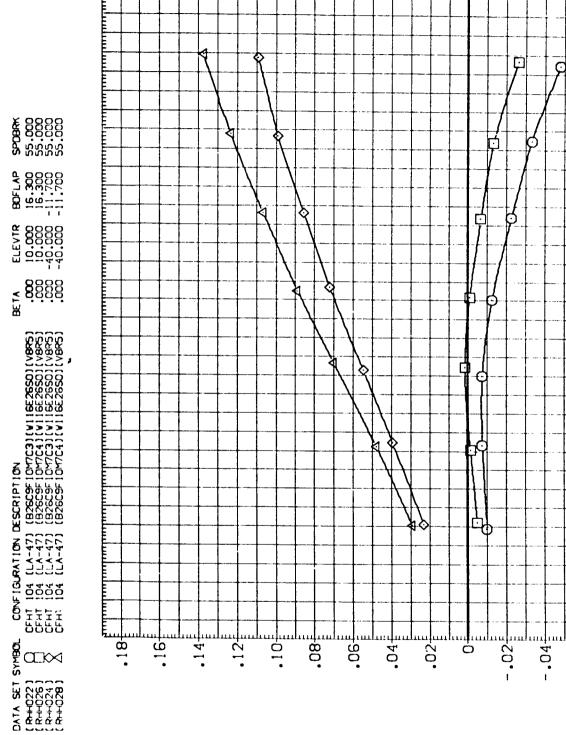
NORMAL FORCE COEFFICIENT, CN "



NORMAL FORCE COEFFICIENT,



AXIAL FORCE COEFFICIENT.



PITCHING MOMENT COEFFICIENT, CLM

40

38

36

32

28 30 DEGREES

16 18 20 22 24 26 ANGLE OF ATTACK, ALPHA,

14

12

10

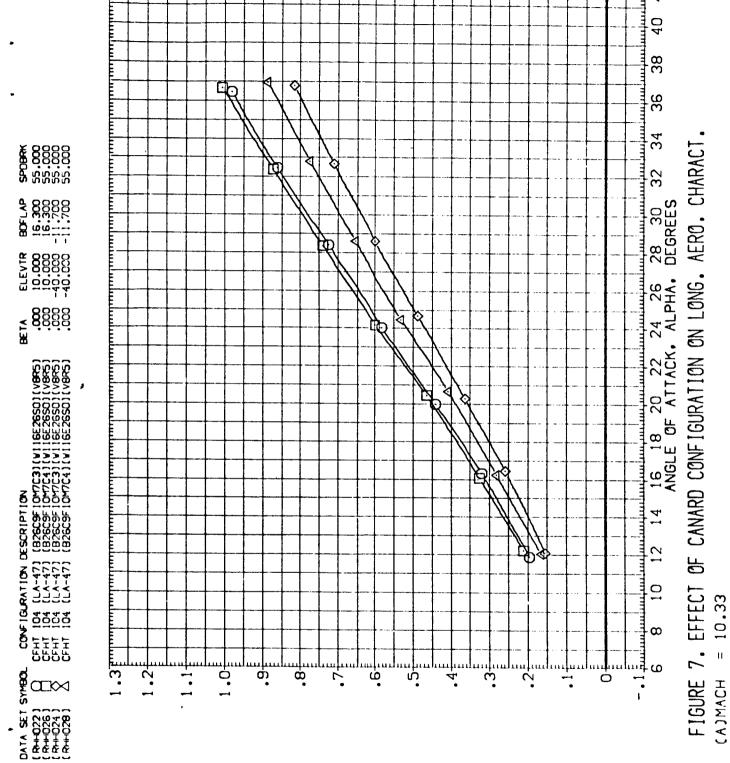
 ∞

F16URE

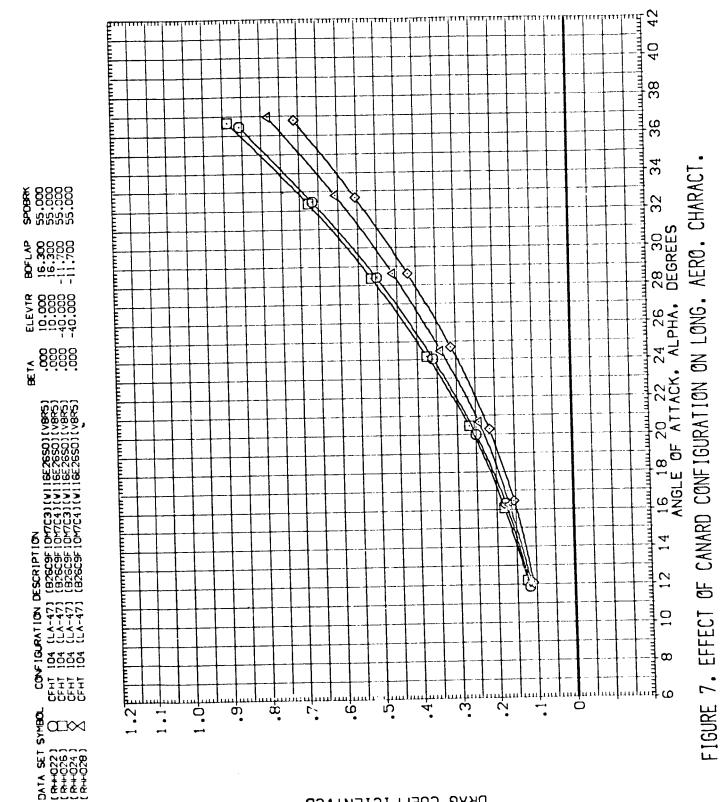
CAJMACH

AERO. CHARACT

7. EFFECT OF CANARD CONFIGURATION ON LONG. = 10.33



LIFT COEFFICIENT. CL



DRAG COEFFICIENT, CD



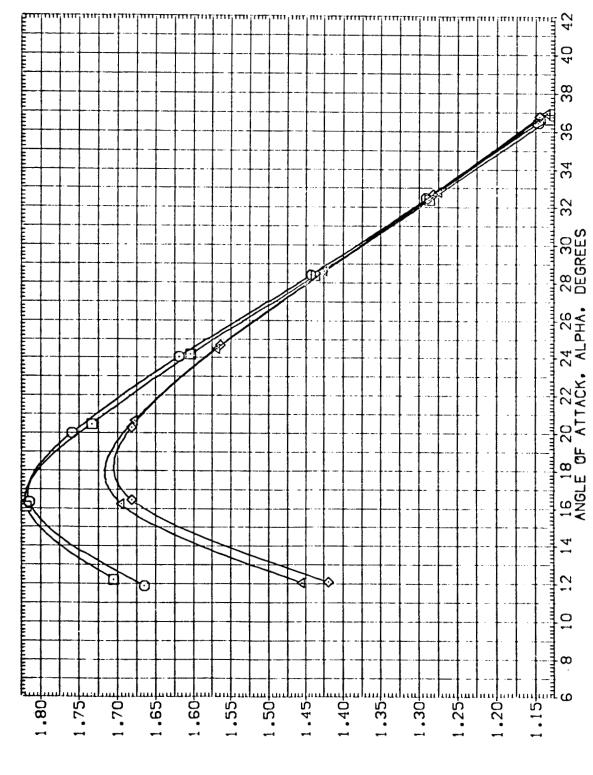
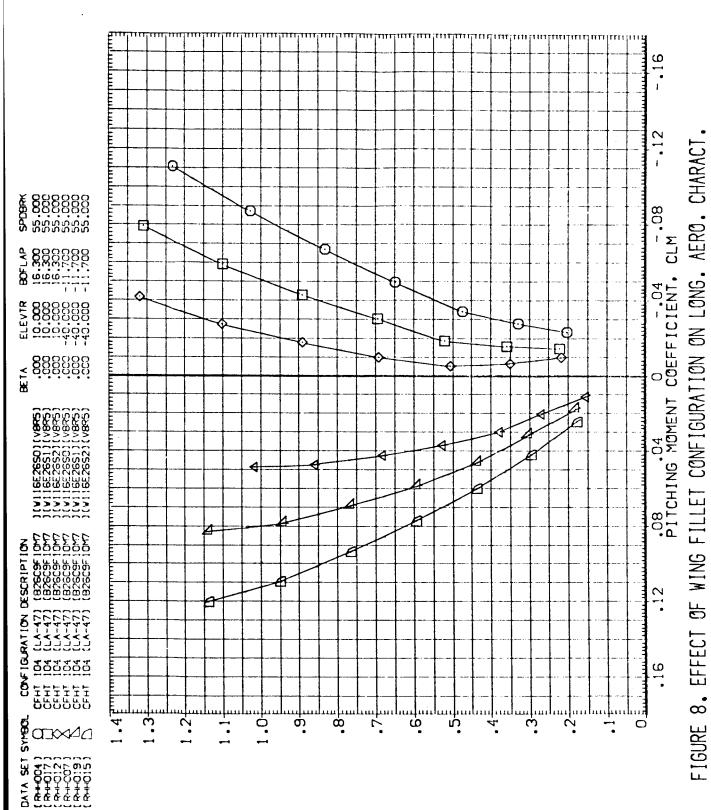


FIGURE 7. EFFECT OF CANARD CONFIGURATION ON LONG.

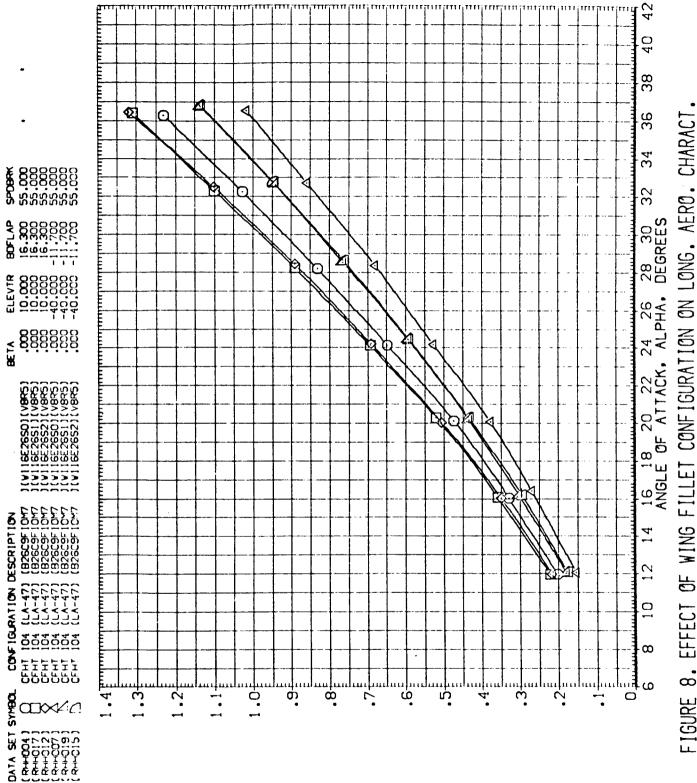


LIFT/DRAG RATIO, L/D



NORMAL FORCE COEFFICIENT, CN

CAJMACH



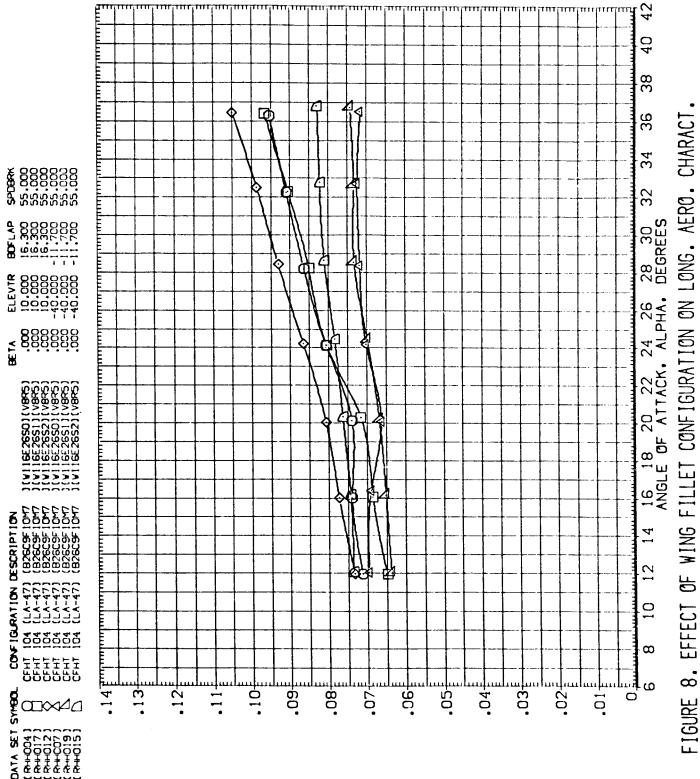
NORMAL FORCE COEFFICIENT, CN

OF WING

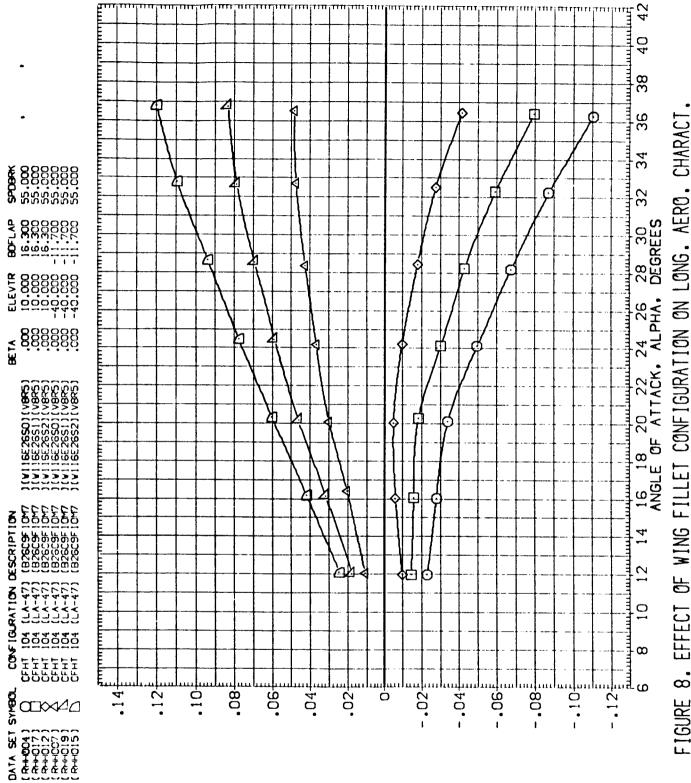
FIGURE 8.

10.33

CAJMACH



AXIAL FORCE COEFFICIENT, CA



PITCHING MOMENT COEFFICIENT, CLM



LONG. AERO. CHARACT

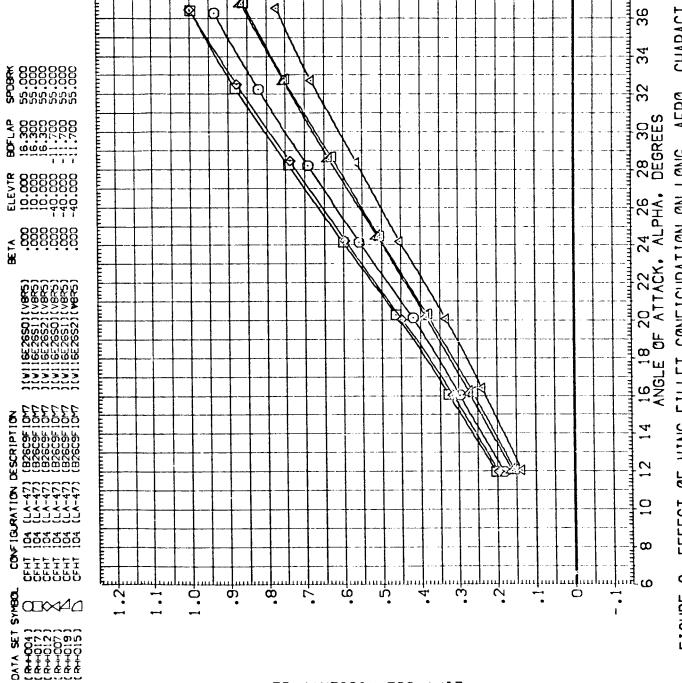
FILLET

OF WING

EFFECT 10.33

œ

FIGURE (A)MACH



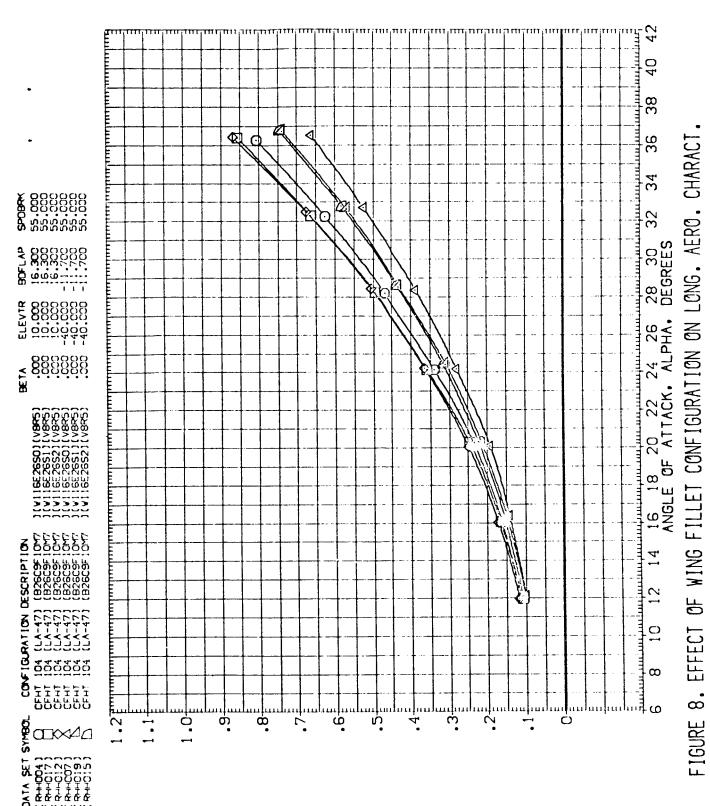
LONG. AERO. CHARACT 8 CONFIGURATION FILLET EFFECT 10.33 . ω FIGURE (A) MACH

42

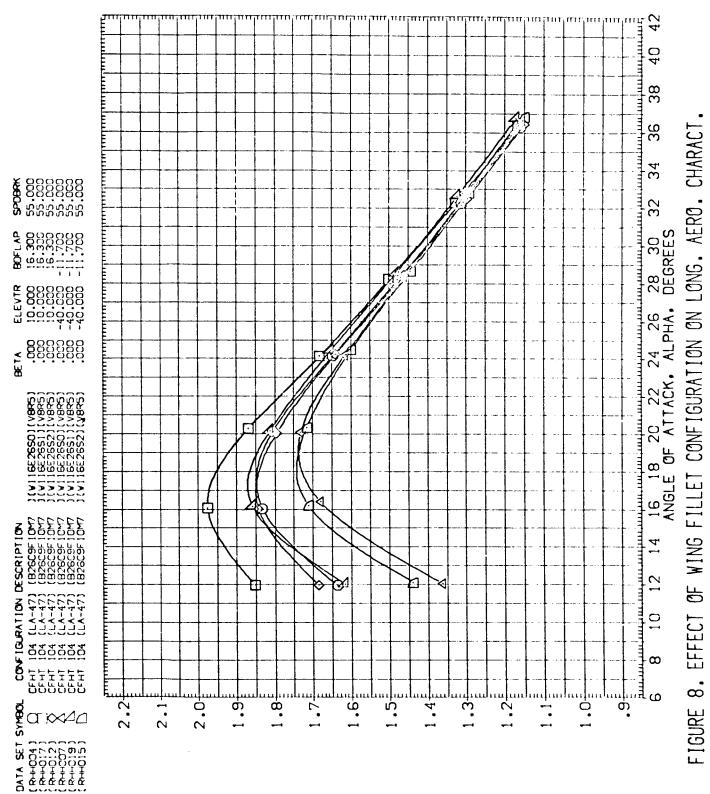
40

38

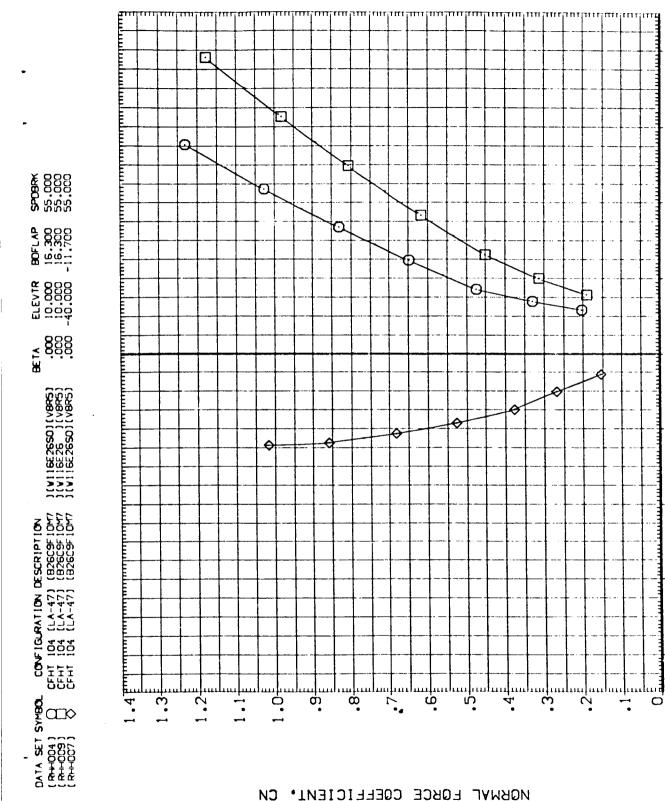
LIFT COEFFICIENT, CL



DRAG COEFFICIENT, CD



LIFT/DRAG RATIO, L/D



FILLET ON LONGITUDINAL AERODYNAMIC CHARACTERISTICS .08 .04 0 -.04 -.08 PITCHING MOMENT COEFFICIENT, CLM EFFECT OF WING 10.33 _ _ FIGURE

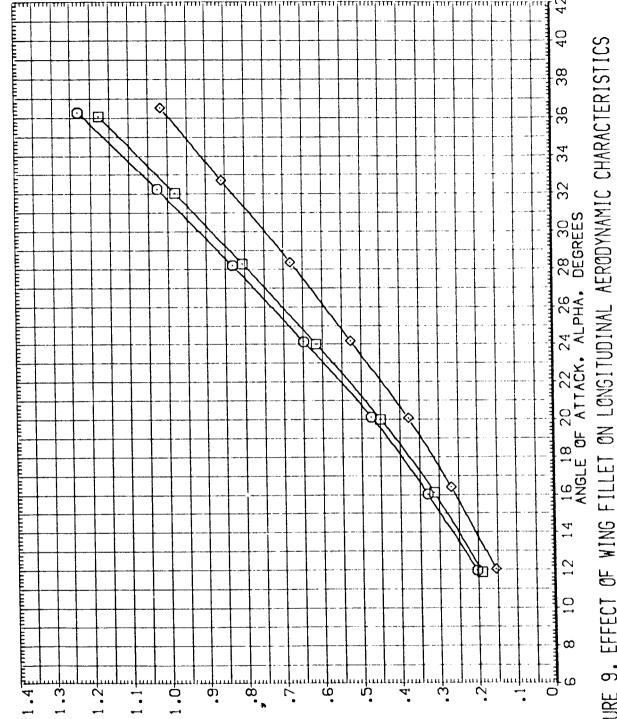
 \sim

ω

O

.12

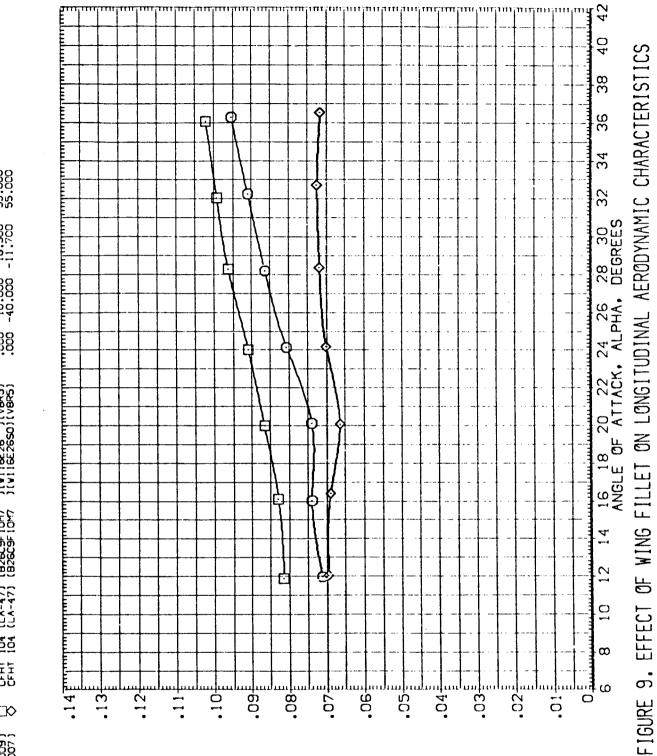
Ð



NORMAL FORCE COEFFICIENT, CN

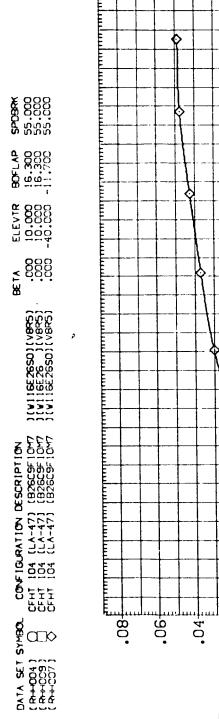
FIGURE 9. EFFECT (A)MACH = 10.33





AXIAL FORCE COEFFICIENT, CA

(A) MACH



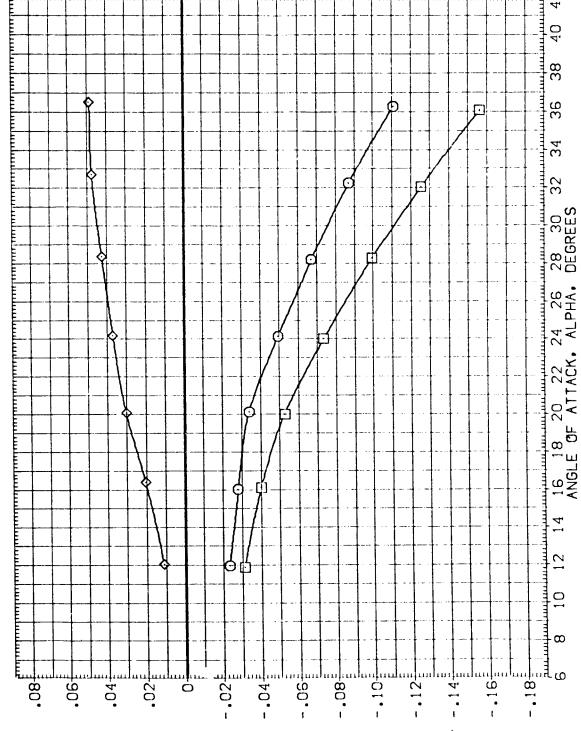
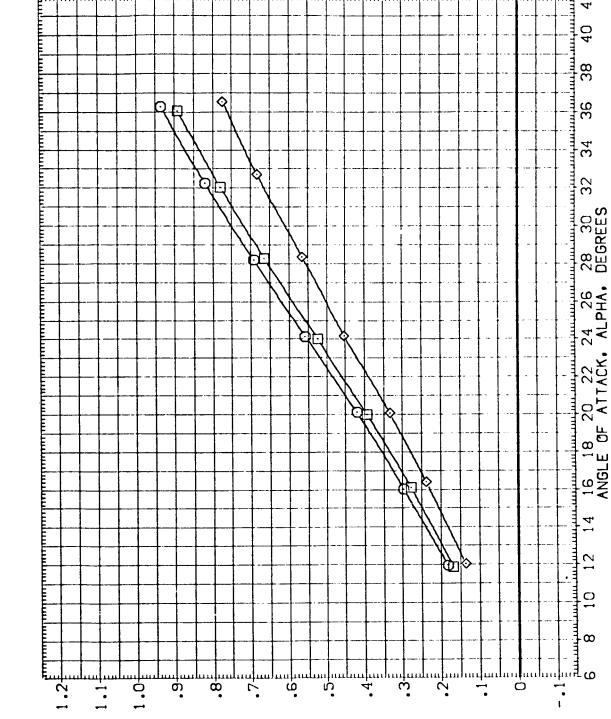


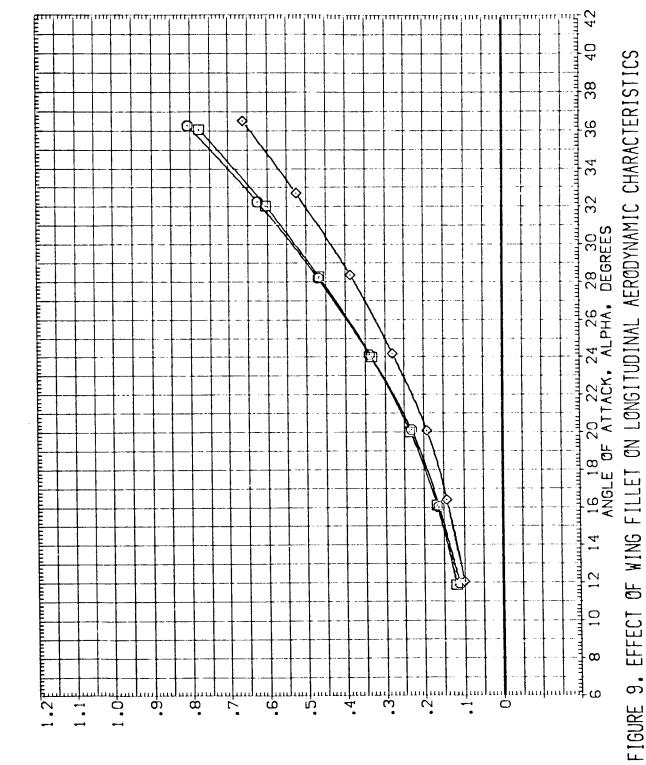
FIGURE 9. EFFECT OF WING FILLET ON LONGITUDINAL AERODYNAMIC CHARACTERISTICS

PITCHING MOMENT COEFFICIENT, CLM



FILLET ON LONGITUDINAL AERODYNAMIC CHARACTERISTICS FIGURE 9. EFFECT OF WING CAJMACH = 10.33

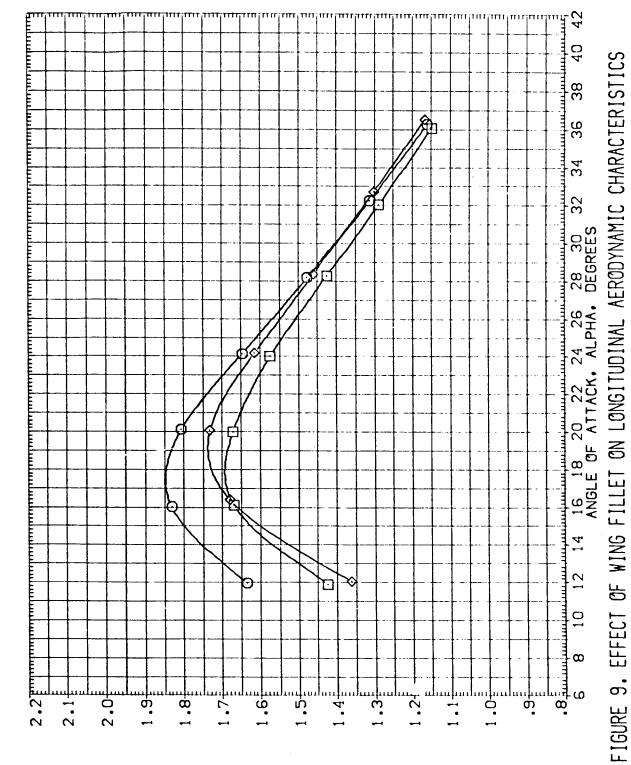
LIFT COEFFICIENT, CL



DRAG COEFFICIENT, CD

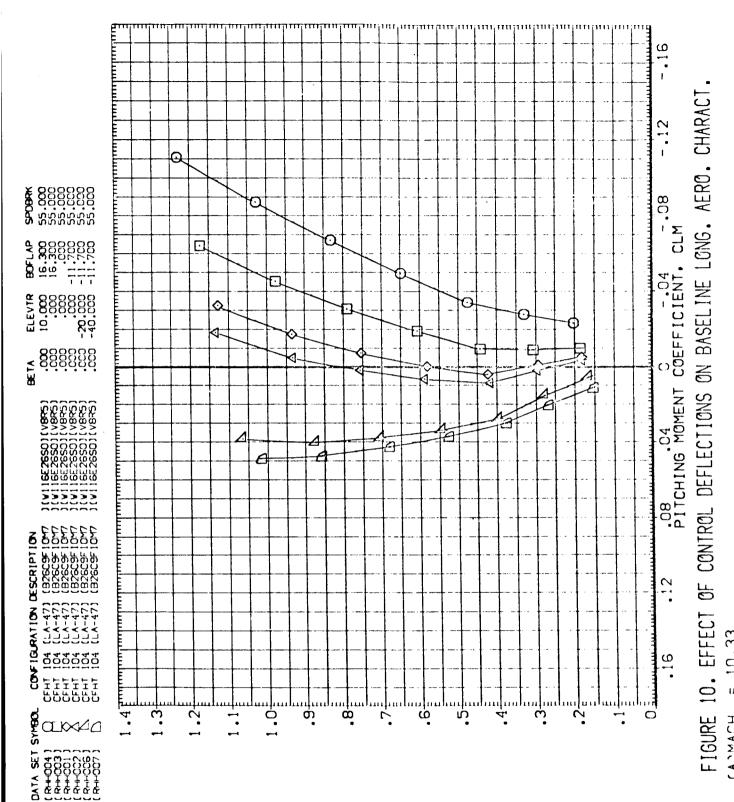
10.33



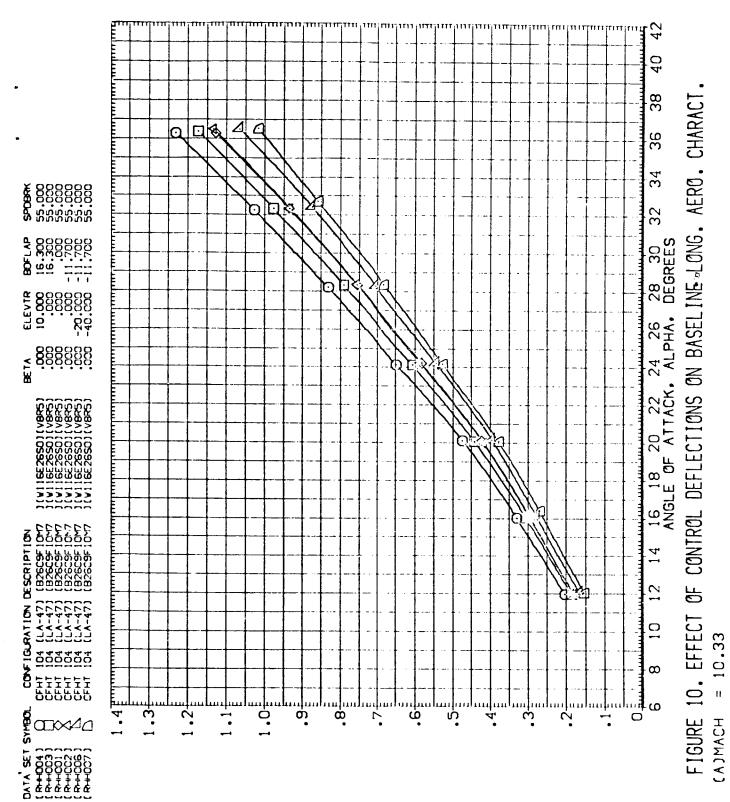


רודו/ספא6 פאווט. בים

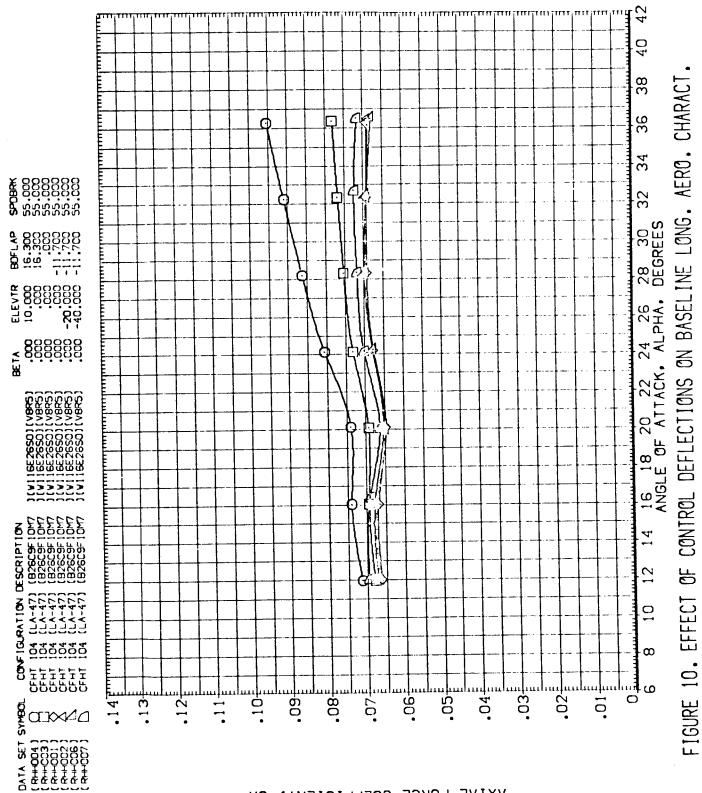
10.33



NORMAL FORCE COEFFICIENT, CN

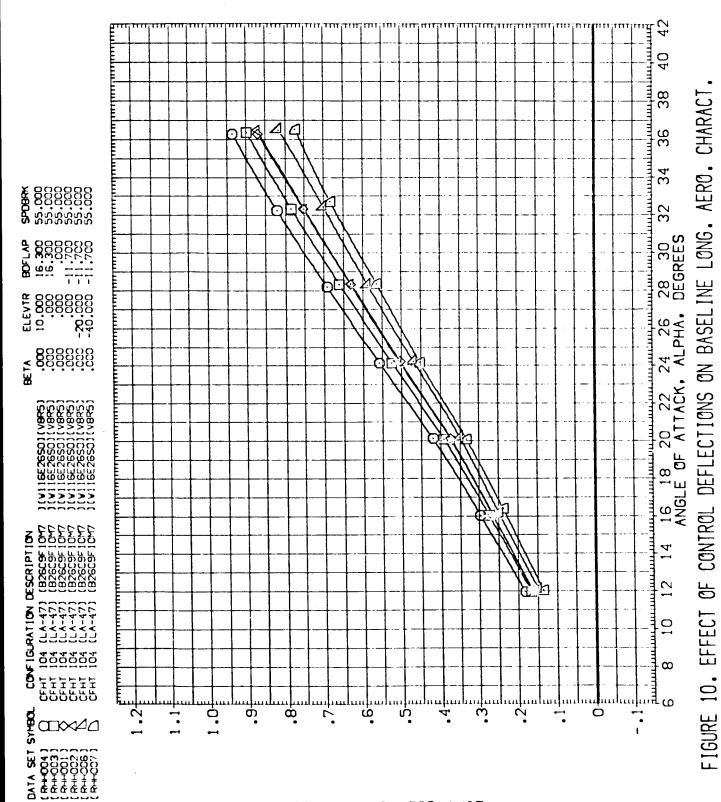


NORMAL FORCE COEFFICIENT, CN

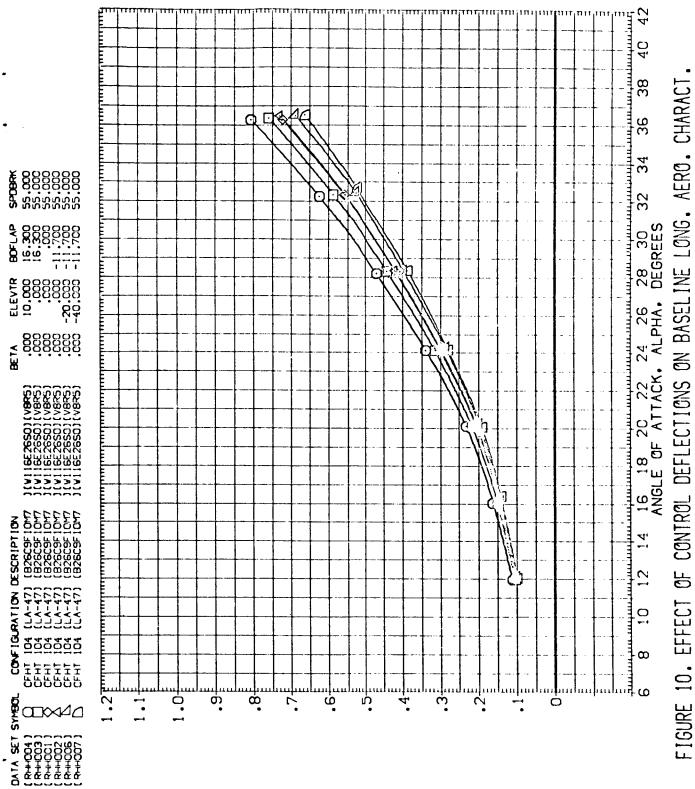


VXIVE FORCE COEFFICIENT, CA

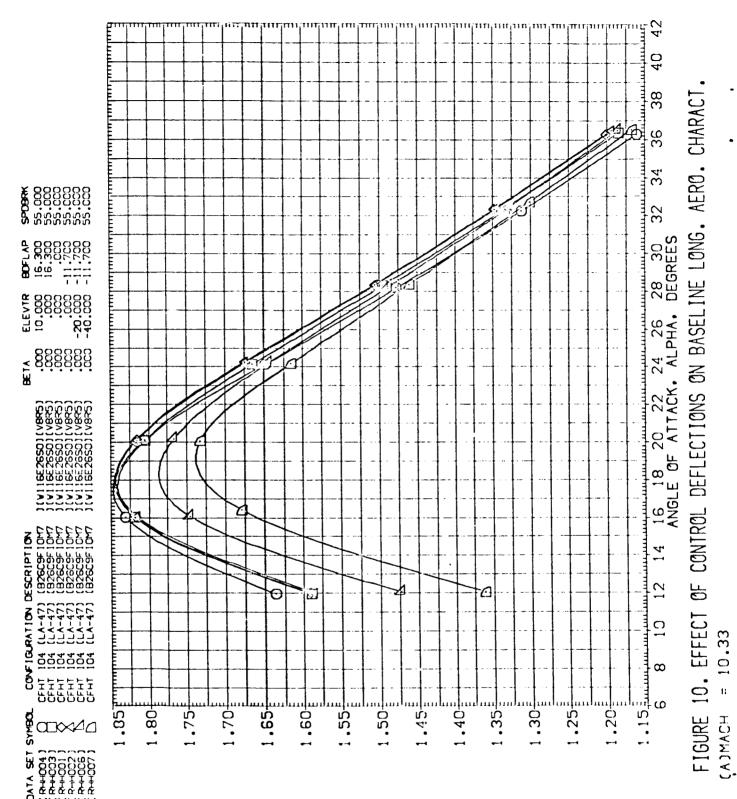
PITCHING MOMENT COEFFICIENT, CLM



LIFT COEFFICIENT, CL

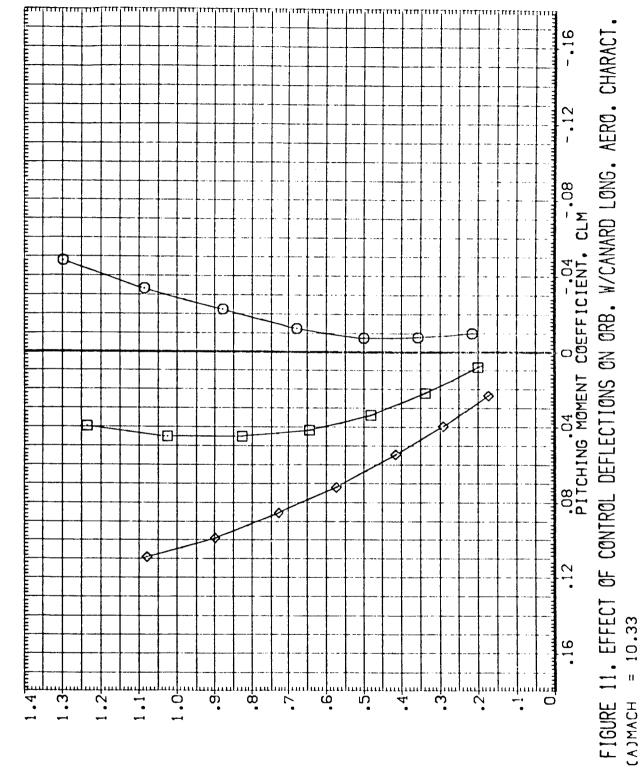


DRAG COEFFICIENT, CD



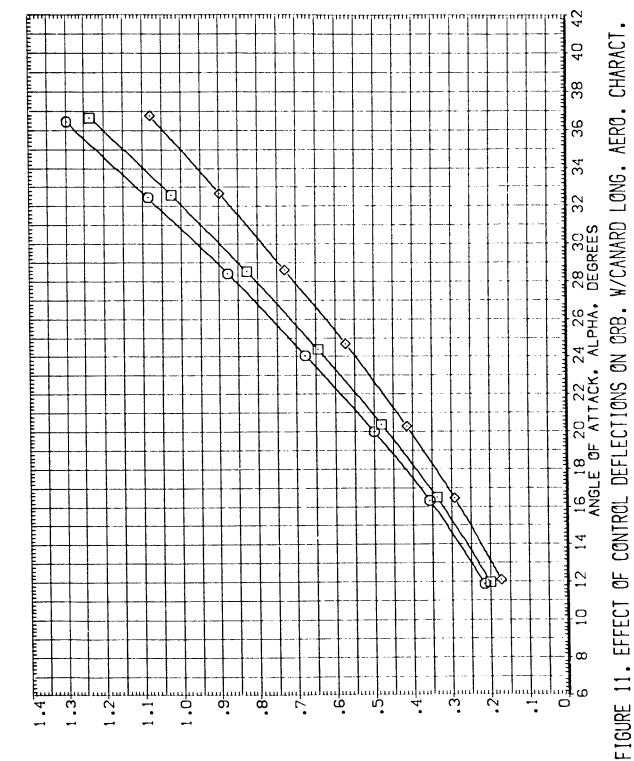
רובו/ספאה פאוום, בים





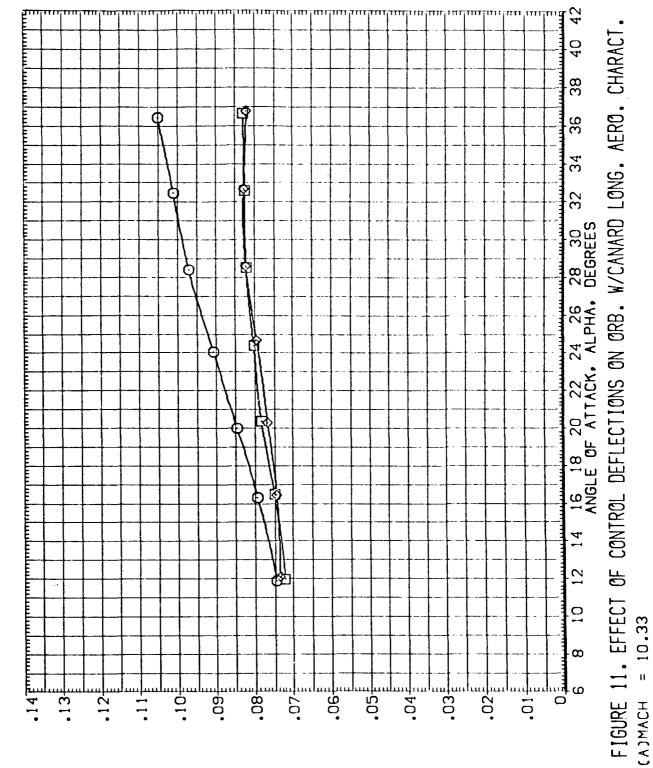
NORMAL FORCE COEFFICIENT, CN





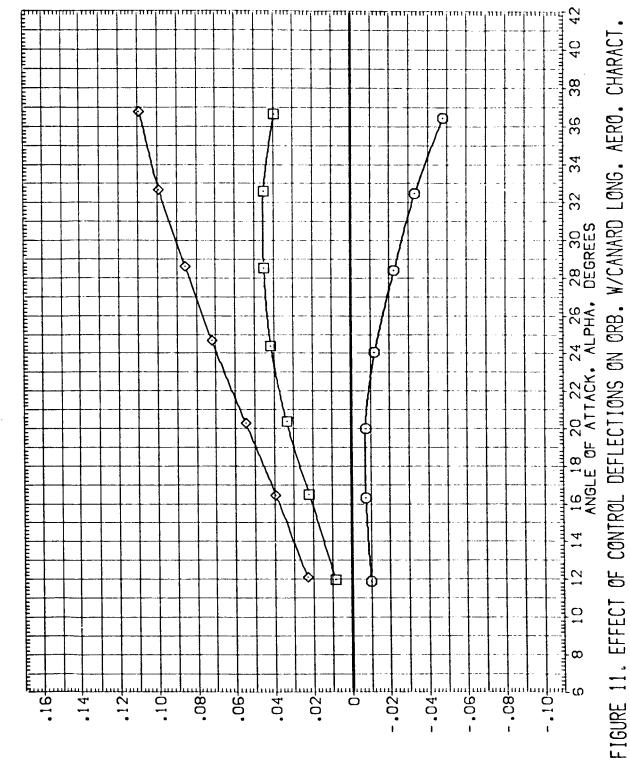
NORMAL FORCE COEFFICIENT, CN





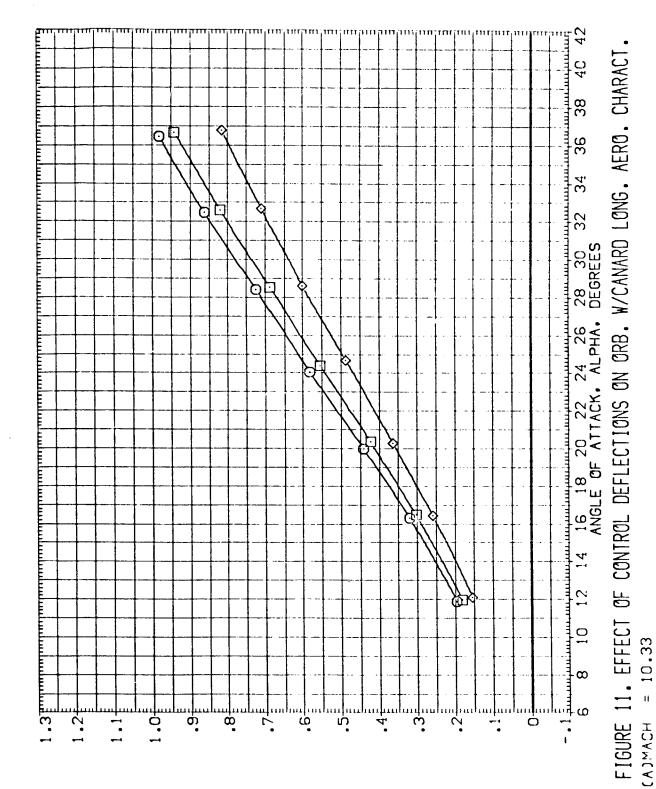
AXIAL FORCE COEFFICIENT, CA



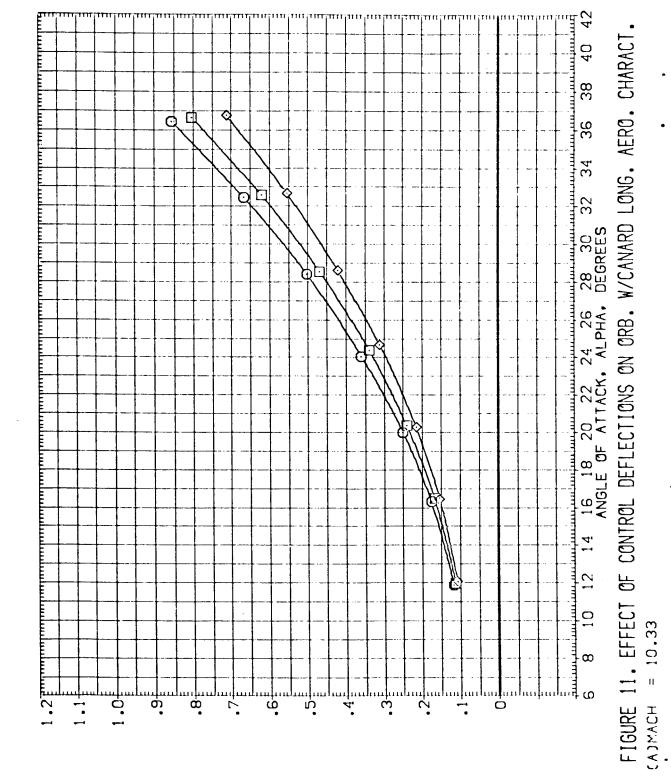


PITCHING MOMENT COEFFICIENT, CLM

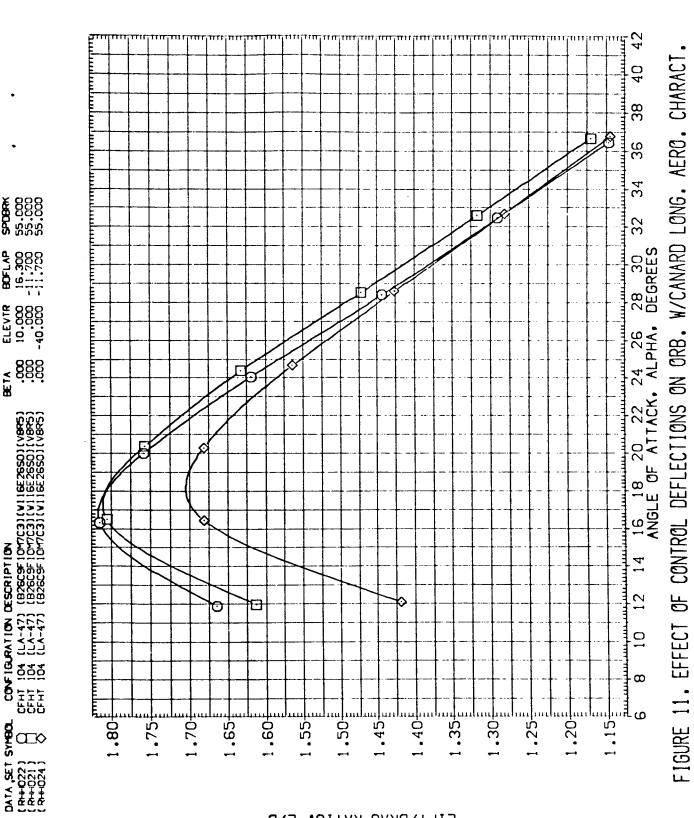
C.A.JMACH



LIFT COEFFICIENT, CL



DRAG COEFFICIENT, CD

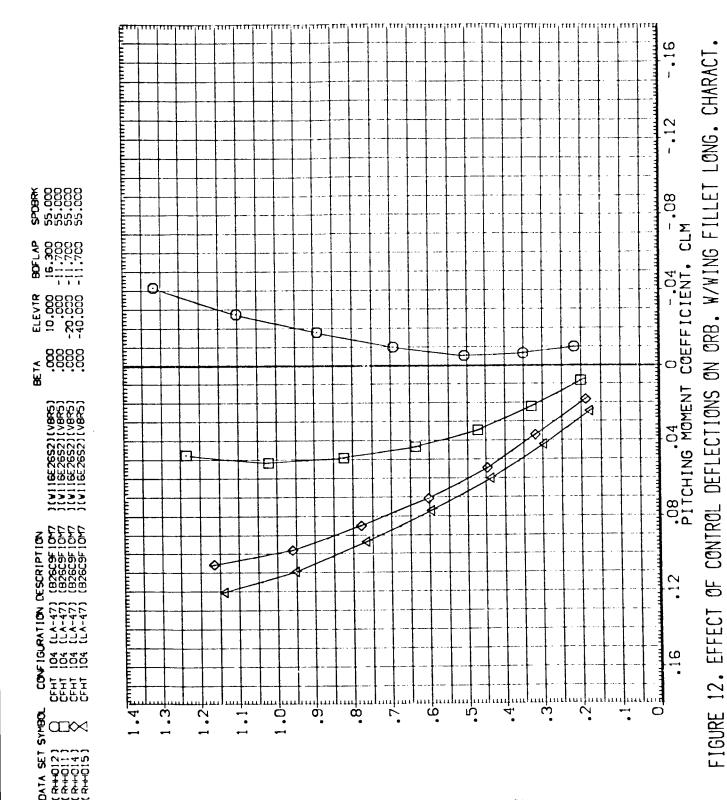


\$5.000 \$5.000 \$5.000

ELEVIR 10.000 -40.000

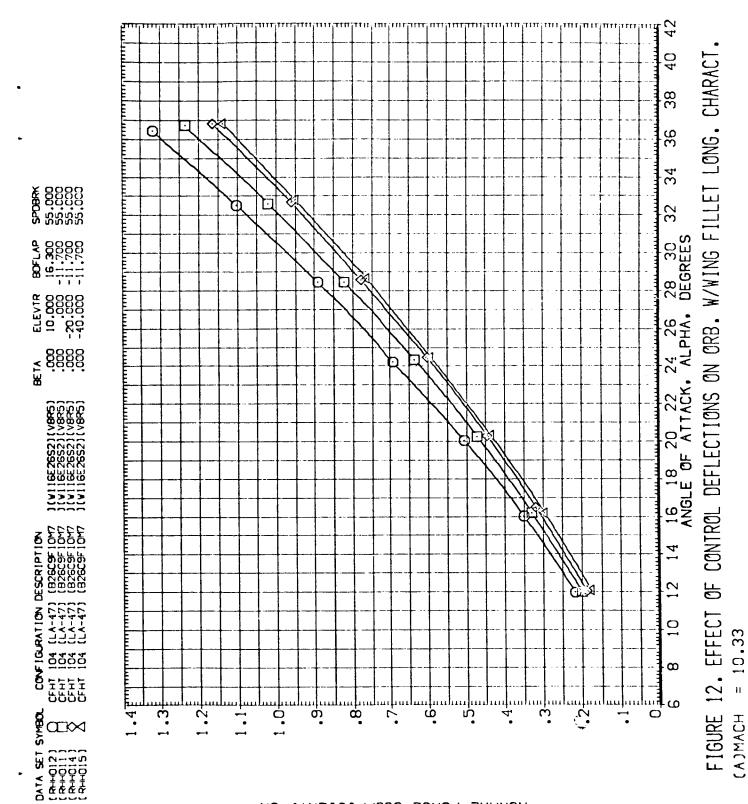
CONFIGURATION DESCRIPTION CFHT 104 (LA-47) (B28C9F10M7C3)(VI16E28S0)(VBRS) CFHT 104 (LA-47) (B28C9F10M7C3)(VI16E28S0)(VBRS) CFHT 104 (LA-47) (B28C9F10M7C3)(VI16E28S0)(VBRS)

LIFT/DRAG RATIO, L/D

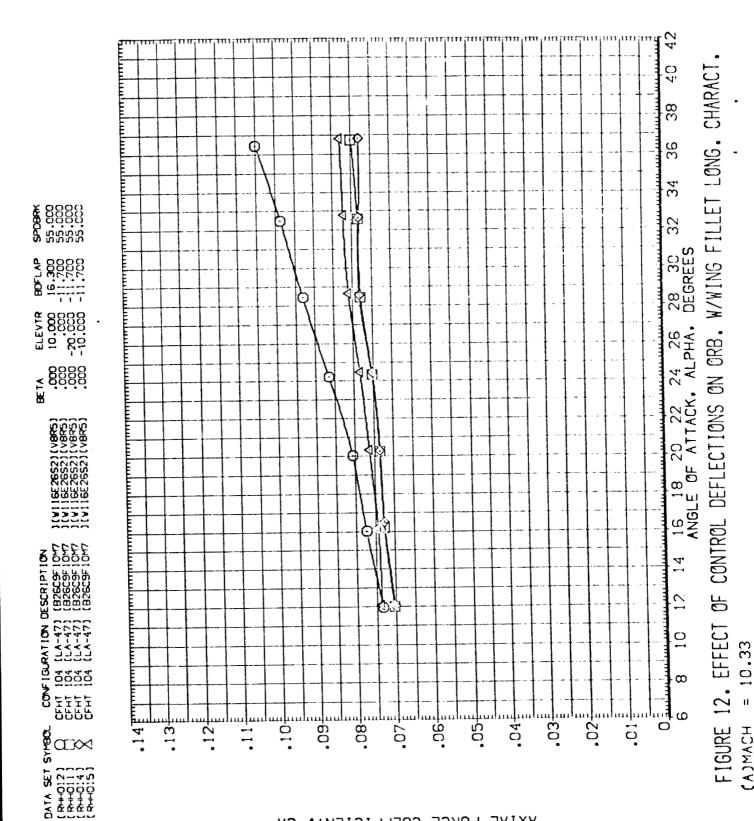


NORMAL FORCE COEFFICIENT, CN

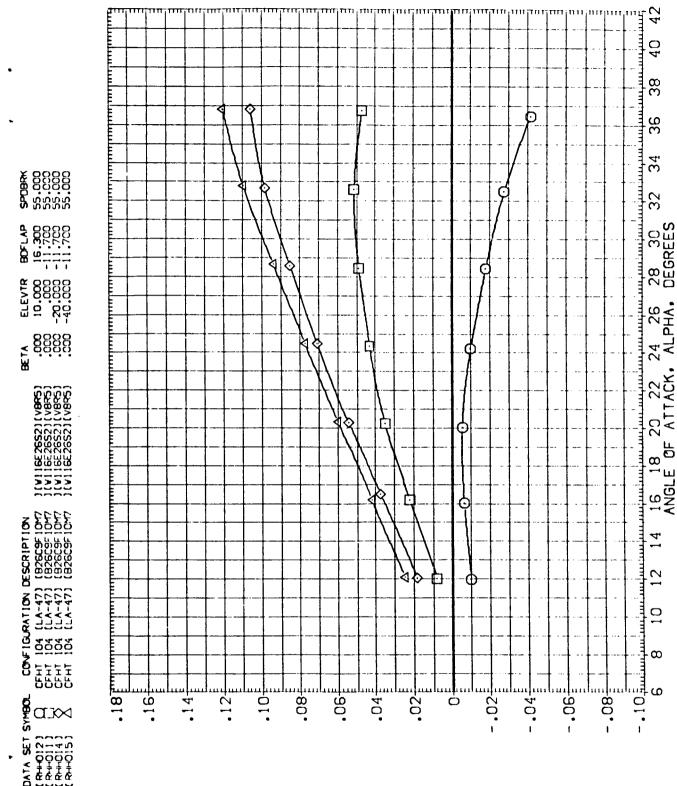
10.33



NORMAL FORCE COEFFICIENT, CN



AXIAL FORCE COEFFICIENT.



W/WING FILLET LONG. CHARACT.

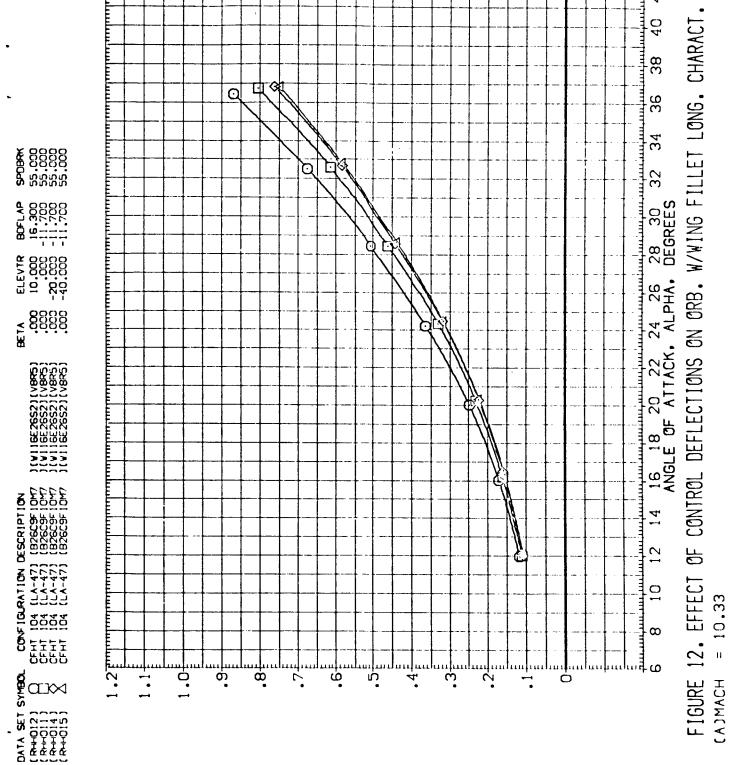
FIGURE 12, EFFECT OF CONTROL DEFLECTIONS ON ORB.

PITCHING MOMENT COEFFICIENT, CLM

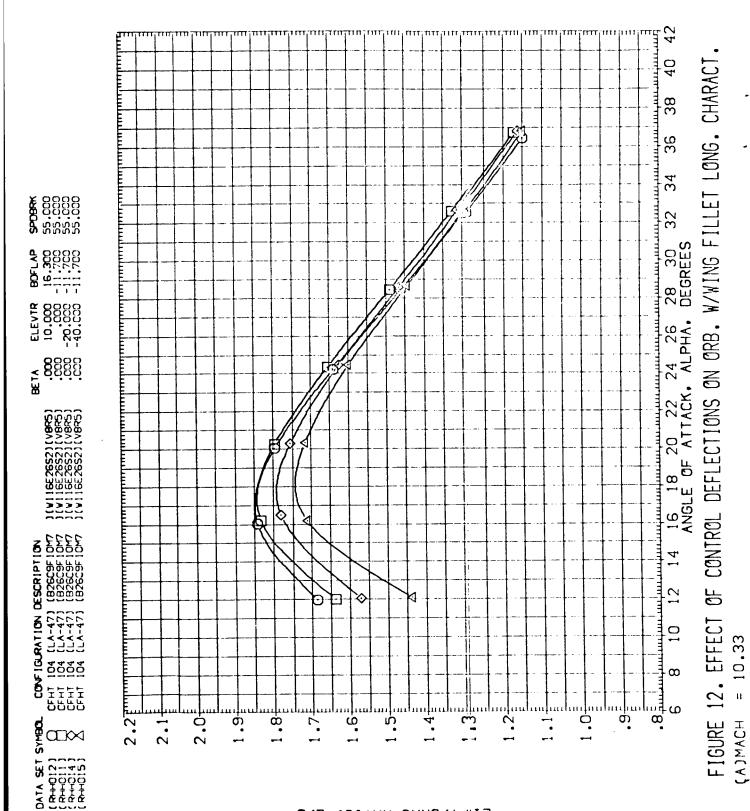
W/WING FILLET LONG. CHARACT. FIGURE 12. EFFECT OF CONTROL DEFLECTIONS ON ORB.

40

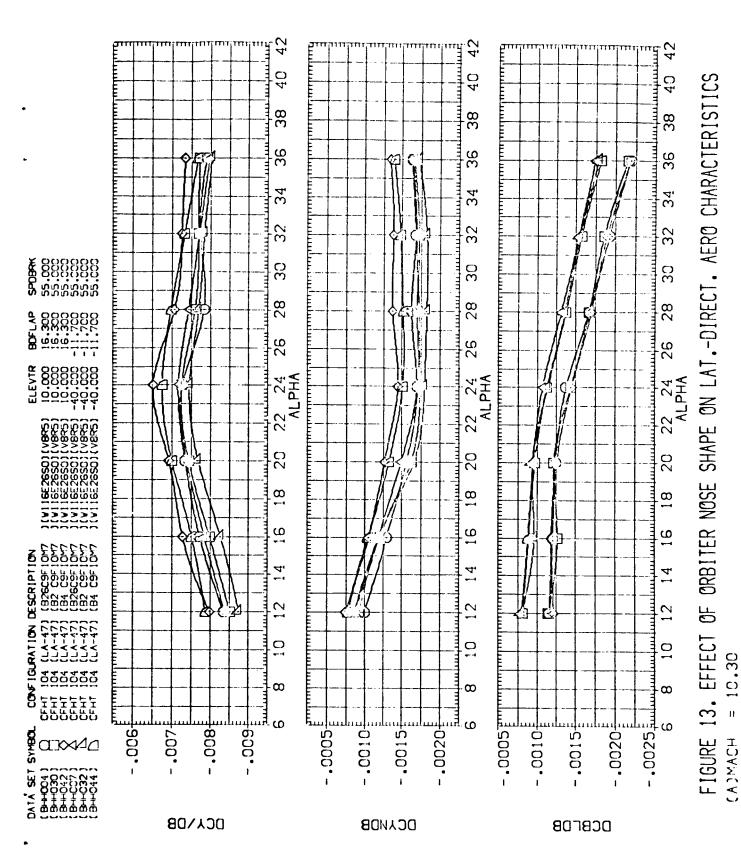
LIFT COEFFICIENT, CL

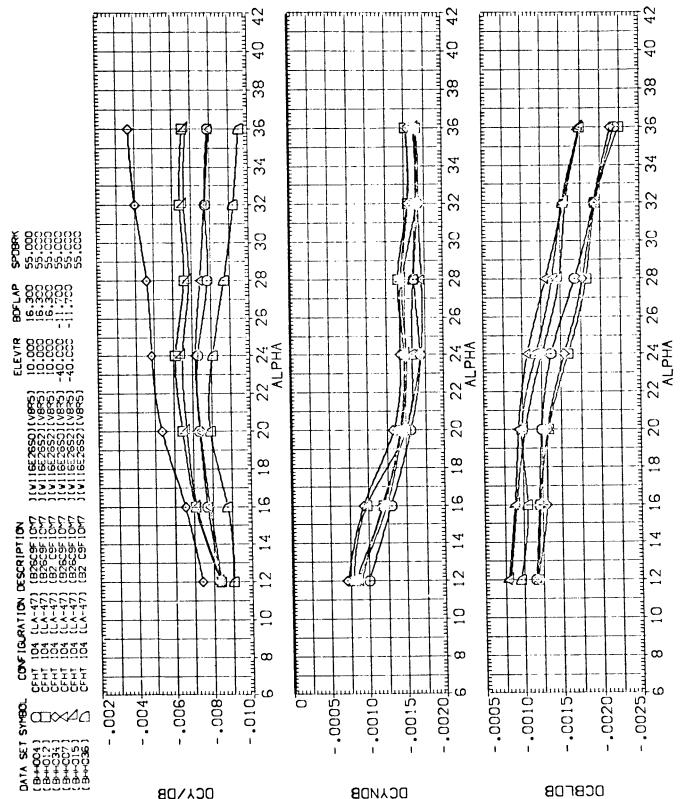


DRAG COEFFICIENT, CD



LIFT/DRAG RATIO. L/D





SHAPE ON LAT.-DIRECT CHARACT. ORBITER NOSE WING FILLET AND FIGURE 14. EFFECT = 10.30(A)MACH

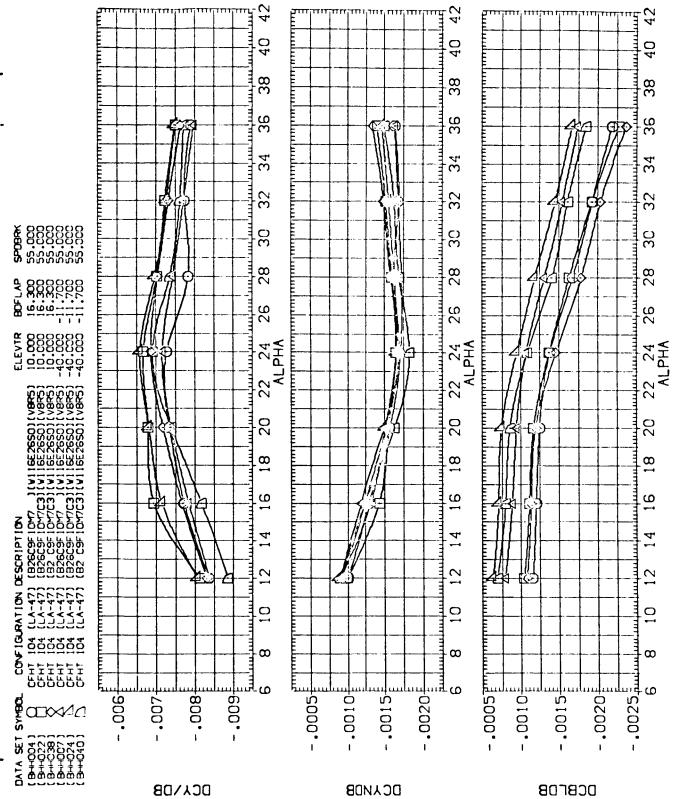


FIGURE 15. EFFECT OF CANARD AND ORBITER NOSE SHAPE ON LAT.-DIRECT. CHARACT. 10.30 (A)MACH

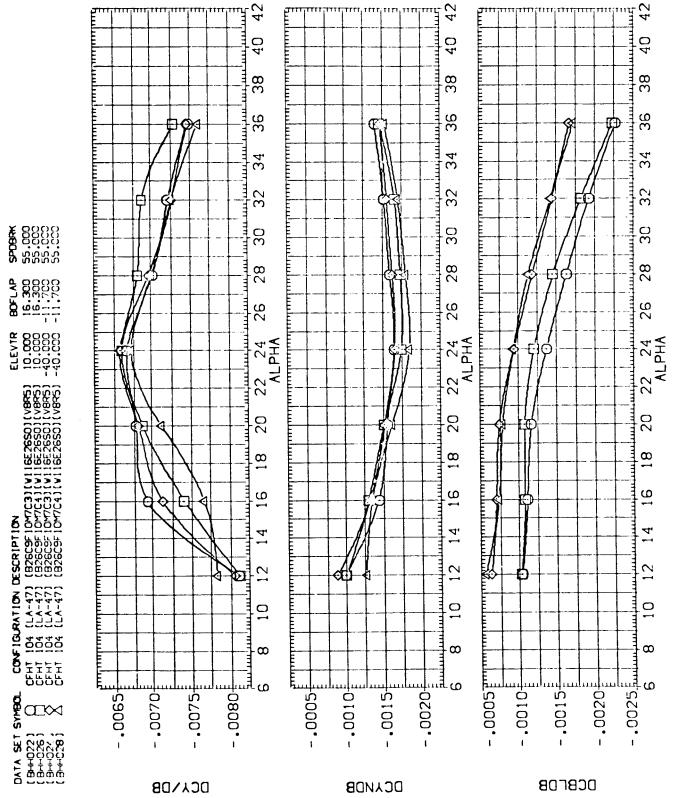
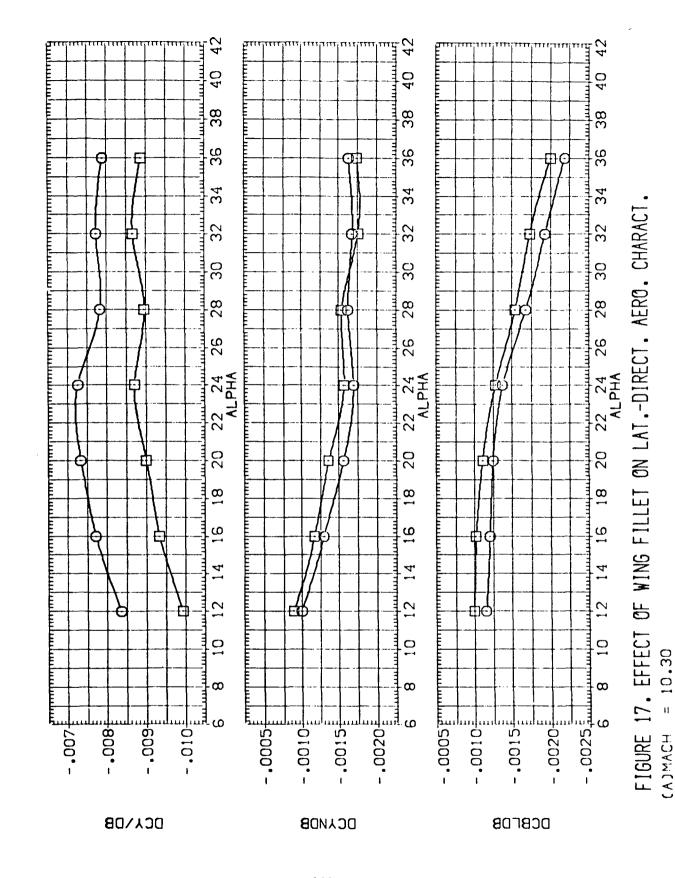


FIGURE 16. EFFECT OF CANARD CONFIGURATION ON LAT.-DIRECT. CHARACT (A)MACH



\$9088K 55.000 55.000

BOFLAP 16.300 16.300

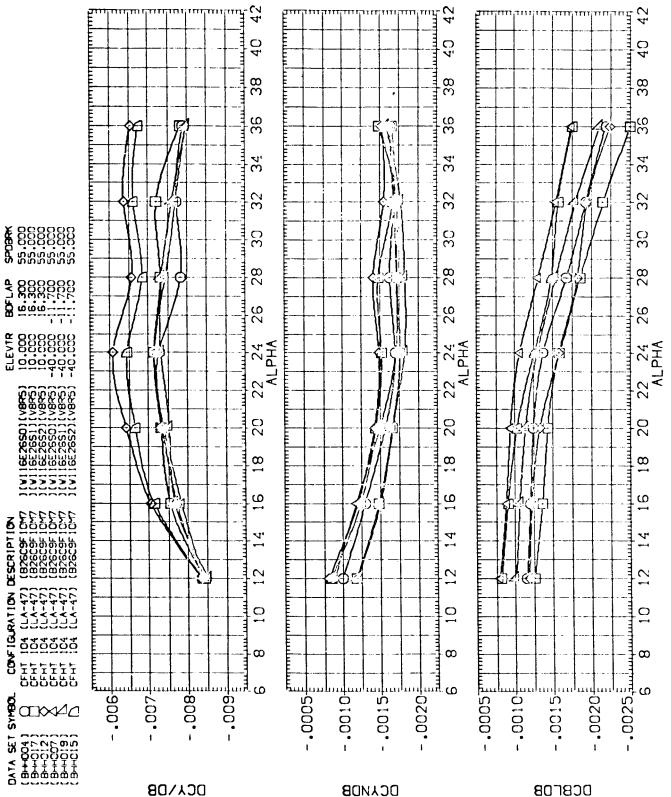
ELEVTR 10.000 10.000

>)(V116E26SO)(VBPS))(V116E26)(VBPS)

CONFIGURATION DESCRIPTION CFHT 104 (LA-47) (926C9F10M7 CFHT 104 (LA-47) (926C9F10M7

DATA SET SYMBOL (BHO04)

101



18. EFFECT OF WING FILLET CONFIGURATION ON LAT.-DIRECT CHARACT 10.30 CAJMACH

APPENDIX

TABULATED SOURCE DATA

(Note: Run number sequence follows schedule listed in TABLE II.)

Plotted data tabulations are available from DMS on request.

RIAM NO. 33 / 0 CFHT 104 (LA-47) (RESCOFTONT) (MAISEESSD) (VORS)	ALPHA BETA CN 1804 1600 150.00303149 .1600 16.00203149 .1600 16.002 24.02202842 .5811 24.02302782 .7544 24.22202842 .5811 25.33602783 .9341 25.23602783 1.1265 15.02302589 1.1266 15.02303806 1.1266 15.02303821 .4174 24.27603821 .5669 22.35703821 .7562 32.337031762 13.328			LAA7 T	LA47 TABULATED DATA	₹					ī	PAGE 1
BETA CN CA CLM CBL CYN CY CYN CYN CYN CYN CYN CYN CYN CYN	BETA CN ND. 35, BETA CN S. 186703169 .2942 .59169 .7542 .9546 .9546 .9546 .9546 .9546 .9546 .9546 .9546 .9546 .9546 .9546 .9556			CFHT	104 (LA-47)	(B26C9F10	INT) (W16E	2650) (VBR5)		(RHH001)	01)	
RUM ND. 33 / D	BETA CN CN BS, BETA CN									PARAMETRIC DATA	C DATA	
### PETA CN CA CLM CBL CYN CY CYN CY CN CN CLM CBL CYN CYN CYN CN CN CLM CBL CYN CN CN CN CLM CBL CYN CN002900302003149 .18049 .066230031000003 .000290031000419002102 .00003 .0002900419002102 .00003 .000290041900210 .00001 .00003005040027000210 .00003 .005040050400229002100000100003005040050400229 1.12657 .066930323300016 .00037010730107300210000370127302399 1.12657 .066930323300016 .00034012730127300210 .0003701273002100003701273002100003701273002100003701273002100003700210000290029703508006600033000039000290002900359003340000900020002970035000234000090002000297003500023400009000200023400359002370035200353000090002900029003590035200352003520035200353000090002900029003590035200352003520035200352003520035200352003520035200352003520035300009000290005900059003520035	BETA CN BETA CN BETA CN 03149186 02149233 02149423 02735 .934 02735 .934 RUN ND. 34/ BETA CN 03508180 035275865 035275865 035275865 035275865 0316233162								Z v	000.	ELEVTR = BOFLAP =	000.
BETA CN CA CLM CBL CYN03149 .18049 .086830051000014 .000290030202169 .24482 .06480 .0040400005 .000220046402819 .42312 .06480 .0040400005 .000220044 202842 .58166 .0677000029 .00012 .000090044 202842 .58166 .0677000029 .00012 .0000900604 302735 .93410 .086980174500011 .0003100082 402735 .93410 .086980174500011 .0003701073 40239 1.12657 .066930323500016 .0004601275 CFHT 104 (LA-47) RESECSFIDM7) (MISEZ6SD) (VRR5) RUN ND, 34/ D RETA CN CA CLM CBL CYN CY03508 .16069 .006500035000016 .000260029703508 .16069 .006500035000006 .000200044003297 .35690 .06720 .00063000060056903297 .35690 .06677 .00063000060056903297 .35690 .06720 .00063000060056903177 .06907 .0006300006000060056903162 .33177 .06907 .00007 .0000900009	BETA CN 03149186 03149294 0219 .423 02795 .934 02739 1.126 RUN ND. 34/ BETA CN 035083966 03527417 035275666 031623316233162		S N									
##03149 .18049 .006230011600014 .0002900302 03169 .29492 .006910011600003 .0003100419 02242 .58166 .0677000029 .00012 .0003100644 02735 .93410 .0069080174500011 .0003701073 02735 .93410 .0069080174500011 .0003701073 02735 .12657 .066930323500018 .0004601275 CFHT 1D4 (LA-47) RESCOFIDM) (MISEZESD) (VER5) RUN ND. 34 / D RUN ND. 34	BETA CN 03149 02169 02642 02642 02755 02755 02755 02569 03569 03676 03676 03636 03667 0367 03	AL PHA	BETA	ž	5	X	é	Z	5	ರ	8	م
503169 .24452 .06691001600005 .0002200464 .022919 .02212 .06480 .0040400005 .00012 .0000900464 .02755 .958166 .0677000729 .00012 .0000900604 .00012 .00009 .00001 .00609 .00001 .00009 .00001 .00608 .00002 .00001 .00009 .000009 .00009 .00009 .000009 .000009 .000009 .00009 .00009 .000009 .00009	BETA CN CN -2966 - 1332 - 1326 - 1326 - 1326 - 1326 - 1326 - 1326 - 1326 - 1326 - 1326 - 13336	12.005	03149	1,8049	.06623	00510	00014	00029	-,00302	.16277	.10232	1.59074
## CRESTS .06480 .0040400005 .0040200464 ##02762 .75469 .065190071200001 .0000300604 ##02755 .95410 .065990174500011 .0003701073 ##02599 1.12657 .066930174500018 .0004601175 ##02599 1.12657 .066930323500018 .0004601275 ## CFHT 104 (LA-47) (R26C9F10M7) (M16EZ6SD) (VRR5) ## RUN NO. 34/ D ## CA	BETA CN	16.025	03169	.29492	16880.	-,00118	0000	.00031	00419	.26499	.14573	1.81836
E02842 .58166 .0697000029 .00012 .000090060402735 .93410 .069990071200001 .00031008620107300273502735 .93410 .069990174500018 .0003701073010750107502739 1.12657 .066930323500018 .0004601275010750107710107701077010770107701077010770107701077101077	BETA CN0303003162031320313203132031320316203132031620313202762 1.1333	20,133	-,02919	,42312	.06480	40404	.0000	.00022	00464	.37496	.20648	1.81594
### CPT82	BETA CN D3A/ BETA CN D3A/ BETA CN D3A/ BETA CN D30035089966035095966035095966035095966035095966035095966035095966	24,222	02842	.58166	.06770	-,00029	.00012	60000.	00604	.50267	.30038	1.67348
##02735 ###02735 ####0174500021 .0003701275 ####################################	BETA CN 02599 1.126 1.02999 1.126 RUN ND, 34/ BETA CN 03508 .1800 03510 .2966 03510 .2966 03510 .7156 03030 .7566 03162 .9311	28.353	02782	.75469	61690	00712	-,00001	.00031	00862	.63129	.41930	1,50561
FUN NO. 34 / D BETA CN CA CLM CPH 104 (LA-47) (R26C9F10M7) (M16E26SD) (V8R5) CFHT 104 (LA-47) (R26C9F10M7) (M16E26SD) (V8R5) CFHT 104 (LA-47) (R26C9F10M7) (M16E26SD) (V8R5) BETA CN CH 105 CH CA CLM CYN CYN CYN CYN CYN CYN CYN CY	BETA CN 03508 .1801 03510 .2966 03610 .2966 0362 .4177 03297 .5866 03030 .7566 03162 .9311	32,338	02735	.93410	80690	-,01745	00021	.00037	01073	. 15227	.55803	1.34606
RUN ND. 34 / D BETA CN CA CLM CBL CYN CYN CYN CY03508000280029703508 .18089 .066600035000018000280029703410 .29682 .06720 .0018300007 .000340036503421 .41741 .06469 .0065300009 .000080056903507 .38690 .06771 .00662 .00009 .000080056903162 .93170 .06909 .00000 .00008000981	BETA CN BETA CN BETA CN CN BETA CN	36.291	02399	1,12657	.06893	03235	00018	.00046	01275	.86724	.72236	1,20056
BETA = AILRON = SPORK	BETA CN CA CLM CBL03508 .18089 .06660003500001803610 .29662 .06720 .001830000703421 .41741 .06469 .006530000703297 .56690 .06771 .00662 .0000603030 .75620 .06927 .00203 .0000603162 .93177 .069030049700019			CFHT	104 (LA-47)	(B26C9F10M	() (M16E2	165D) (VRR5)		(RHH002)	8	
BETA = AILRON = AILRON = SPORRK = AILRON = SPORRK = AILRON = SPORRK = SPORR	BETA CN CA CLM CEL03508 .18089 .06660003500001803510 .25962 .06750 .00183000070321 .41741 .06459 .006530000903297 .58690 .06771 .00662 .0000803162 .93177 .06903004970001902762 1.13328 .068670182200020								•	PARAMETRIC DATA	DATA	
BETA = AILRON = SPORK	BETA CN CA CLM CBL03508 .18089 .06660003500001803610 .29682 .06720 .001830000703421 .41741 .06469 .006530000903297 .56690 .06771 .00662 .0000603030 .75620 .06927 .00203 .0000603162 .93177 .069030049700019											
BETA CN CA CLM CBL CYN CY CY C.03508 .18089 .066600035000018 .000280029703510 .25682 .06720 .0018300007 .000340036503297 .25690 .06771 .06669 .00652 .00008 .000280056903297 .56690 .06771 .00662 .00008 .000080056903162 .03162 .00008 .0000800591	BETA CN CA CLM CEL03508 .18089 .06660003500001803510 .25962 .06750 .00183000070321 .41741 .06469 .006530000803297 .58690 .06771 .00662 .0000803162 .93177 .06903004970001902762 1.13328 .068670182200020								Z	000.	ELEVTR = BOFLAP =	.000
BETA CN CA CLM CBL CYN CY03508 .18089 .066600035000018 .000280029703510 .29682 .06720 .0016300007 .000340036503421 .41741 .06469 .0065300009 .000200034003297 .58690 .06771 .00662 .00006 .000080056903302 .75620 .06927 .00203 .00006 .000290081903162 .93177 .06627 .00203 .0002900819	BETA CN CA CLM CBL03508 .18089 .06660003500001803610 .29662 .06720 .001830000703421 .41741 .06469 .006530000703297 .56690 .06771 .00662 .0000603030 .75620 .06927 .00203 .0000603162 .93177 .06903004970001902762 1.13328 .066670182200020									22,000		
BETA CN CA CLM CBL CYN CY03508 .18089 .066600035000018 .000280029703510 .29682 .06720 .0016300007 .000340036503421 .41741 .06469 .0065300009 .000200034003297 .58690 .06771 .00662 .00006 .000080056903302 .75620 .06927 .00203 .00006 .000290081903162 .93177 .06627 .00203 .00006 .0002900819	BETA CN CA CLM CBL03508 .18089 .06660003500001803610 .29682 .06720 .001830000703421 .41741 .06469 .006530000703297 .56690 .06771 .00662 .0000603030 .75620 .06927 .00203 .0000603162 .93177 .06903004970001902762 1.13328 .066670182200020		RCN NO.									
03508 .18089 .066600035000016 .0002800297 .003610 .29682 .06720 .0018300007 .0003400365 .003421 .41741 .06469 .0065300009 .0002000440 .00229 .00571 .00662 .00008 .00008 .0000800569 .00330 .75620 .06927 .00203 .00006 .00009 .00019 .00019 .00019 .00019 .00019 .00019 .00019	03508 .18089 .06660 00350 00018 03610 .29682 .06720 .00163 00007 03241 .41741 .06469 .00633 00009 03297 .56690 .06771 .00662 .00006 03030 .75620 .06927 .00203 .00006 03162 .93177 .06903 00047 00019 02762 1.3326 .06667 01822 00020	ALPHA	BETA	ž	ð	r,	ฮ	N.	5	J	8	ع
03610 .29662 .06720 .0018300007 .00034003650342	03610 .29682 .06720 .0018300007 03297 .36690 .06771 .00662 .00008 03030 .75620 .06927 .00203 .00006 03162 .93177 .069030049700019 02762 1.13328 .068670182200020	12.025	03508	.18089	.06660	00350	00018	.00028	00297	.16305	.10263	1.58568
03421 .41741 .06469 .0065300009 .0002000440 .00297 .56690 .06771 .00662 .00006 .0000800569 .00569 .00330 .75620 .06597 .00203 .00006 .0002900819 .00019 .0002800981 .003162 .93177 .0690300497 .00019 .0002800981	03297 .58690 .06771 .00662 .00009 03297 .58690 .06771 .00662 .00006 03030 .75620 .06927 .00203 .00006 03162 .93177 .069030049700019 02762 1.13328 .068670182200020	16.077	03610	.29682	.06720	.00183	-,00007	.00034	00365	.26661	.14677	1.81648
03297 .58690 .06771 .00662 .00008 .000080056903030 .75620 .06923 .00006 .000290081903162 .93177 .069030049700019 .0002800981	03297 .58690 .06771 .00662 .00008 03030 .75620 .06927 .00203 .00006 03162 .93177 .069030049700019 02762 1.13328 .068670182200020	19.984	03421	.41741	.06469	.00853	60000*-	.00020	00440	37017	.20345	1.81948
03030 .75620 .06927 .00203 .00006 .0002900819 .003162 .93177 .069030049700019 .0002800981	03030 .75620 .06927 .00203 .00006 03162 .93177 .069050049700019 02762 1.13328 .068670182200020	24.276	03297	.58690	.06771	.00662	.0000	.00008	-,00569	.50716	.30302	1.67370
03162 .93177 .069030049700019 .0002800981	03162 .93177 .069090049700019 . 02762 1.13328 .068670182200020	28.367	03030	.75620	.06927	.00203	.00006	.00029	00619	.63249	.42023	1,50510
LICENT - LOUD - COURT - CHARACT - CHORACT - CH	02762 1.13328 .068670182200020	32.337	03162	.93177	60690.	00497	00019	.00028	00981	.75033	.55674	1.34772
		36.498	02762	1.13328	.06867	01822	00020	.00041	01233	.87017	.72927	1.19320

~			.000 16.500	1,56966	1,81973	1.49470	1.18388			10.000		1.63611 1.63611 1.63513 1.64740 1.47633 1.31202 1.16126
PAGE	ŝ	DATA	ELEVTR * BDFLAP *	CD 20491.	.15115	58783	75655	2	DATA	ELEVTR = BDFLAP =		.11149 .11149 .1628 .23218 .38682 .46900
	(RHH003)	PARAMETRIC DATA	000.	ر. 1984ء	39193	66013	£0868.	(RHH004)	PARAMETRIC DATA	000.		CL .18240 .29722 .41910 .55817 .69249 .R2002
			BETA # AILRON # SPOBRK #	ر ر	00373	00838	01262			BETA = AILRON = SPOBRK =		. 00329 . 00420 . 00517 . 00641 . 01097
	CFHT 104 (LA-47) (BZ6C9F10M7) (W116EZ6SD) (V8R5)			CYN	75000.	.00042	.00050	CFHT 104 (LA-47) (BZ6C9F10MF) (HA16EZ6SD) (V6R3)				.00036 .00041 .00033 .00021 .00046 .00030
-	H7) (W16E			9	00001	.00001	00027	HF) (M16E				CBL00016000110001600008000390006600090
2	(B26C9F10			טרא	00997 00920 00958	01885	-,04555	(826C9F10				CLM 02303 02794 03392 04958 06723 08730
LA47 TABULATED DATA	104 (LA-47)			5	.06987 .06927 .06917	.07508	.07613	104 (LA-47)			٠	CA .07129 .07392 .07391 .08069 .09100
7 747	CFHT			35 O	.18491 .30610 .44265	.60682	1,17293	CFHT			36/0	CN .20154 .33047 .47338 .64735 .83191 1.02703
				RUN NO.	03684 03686 03538	-,03364	-,03117				R. N.	BETA 03460 03616 03531 03524 03165
				4	11.985	24,129	32,363					ALPHA 11.954 16.026 20.113 24.160 28.167 32.251 36.304
				į	10.330	10.330	10.330					MACH 10.330 10.330 10.330 10.330 10.330 10.330

			LA47 T	LA47 TABULATED OATA	4					ì	PACE 3
			CFHT	104 (LA-47)	CFHT 104 (LA-47) (BEECGFIOM?) (WAIGEEESD) (VERS)) (W16EE	650) (V6R5)		(RHH005)	(\$0	
									PARAMETRIC DATA	c DATA	
								BETA = ALLRON = SPOBRK =	000.25	ELEVTR = BDFLAP =	16.300
		RUN NO.	. 37/0								
¥ C	ALPHA	BETA	3	ర	5	je S	CYN	5	ჟ	e	ያ
10.330	11.932	-5.12850	.20751	07339	02057	.00572	.00536	.03929	.18786	.11471	1.63767
10.330	15.981	-5.16952	.34410	07659	-,02600	50900	.00703	.03537	30971	.16836	1.83956
10,330	20.044	-5,18617	48986	.07976	03546	.00624	.00636	.03260	.43285	.24283	1.78254
10.330	24.184	-5.16921	.66689	.08545	04967	50100	68800.	26020.	.57335	.35116	1.63276
10.330	28.232	-5,11855	.84795	.09026	-,06780	.00819	00000	.03102	.70438	48064	1.46549
10.330	32,329	-5.04412	1.04404	.09382	08852	2060O.	26900.	.02762	.83204	.63760	1.30495
10,330	36.335	-4.94300	1.23715	.09835	-,11211	26600.	.00865	.02541	93806	.61257	1.15443
,	•										
			CFHT	104 (LA-47)	CFHT 104 (LA-47) (B26C9F10H7) (M16E26SD) (VBR5)) (W16E26	(SQ) (VBR5)		(RHHDD6)	ô	
								u.	PARAMETRIC DATA	DATA	
									1		6
								BETA = Allron = Spoerk =	000. 000. 88	ELEVTR = BOFLAP =	-11.700
		RUN NO.	0 /04								
i	:	i	į	đ	3	ē	3	2	č	8	9
10 SAD	ALTA 12 048	01954	16497	.06708	64	.00037	.00031	00280	14734	.10004	1.47277
10.330	16.064	01874	.27716	.06780	Ĭ	-,00038	65000.	00352	.24758	.14185	1,74538
10.330	20,184	01814	.39694	,06526	.02766	00043	.00022	00434	35005	.19821	1.76606
10,330	24,213	-,01790	.54310	.06775	.03373	00049	.00016	00549	.46754	.28453	1.64320
10.330	28.281	01705	. 70492	.06981	•	00075	.00034	00758	.58770	39546	1.48610
10.330	32,428	01737	.87411	.06912	•	.00103	.00035	00968	. 70075	.52707	1,32951
10.330	36.507	01757	1.06435	.06780	.03847	-,00123	.00053	01168	.81517	.68771	1,16533

PAGE 4			-11.700		ું	1.36173	1.67893	1.73179	1.61512	1,46035	1.30170	1.16754				-40.000		9	1,37755	1.67100	1.69408	1.59410	1.44956	1.30066	1.15821	
Ž	£.	: DATA	ELEVIR = BDFLAP =		e	.10026	.14207	.19223	.27968	.38680	. 52529	.66254		(8)	DATA	ELEVTR = BOFLAP =		9	.10405	.14512	.20511	.29163	.39529	.52523	.67036	
	(RH4007)	PARAMETRIC DATA	000.		ป	.13653	.23852	.33291	.45171	.56486	.68377	.77354		(RHH008)	PARAMETRIC DATA	.5.000 .000 .55.000		J	.14333	.24249	.34748	.46488	.57299	.68314	.77642	
			BETA = AILRON = SPOBRK =		č	-,00502	00354	-,00423	00553	-,00779	61600	-,01126				BETA = ATLRON = SPOBRK =		č	03938	.03659	.03367	.03118	.03016	90620.	.02808	
	2650) (VBR5)				N.	15000.	000030	.00026	.00012	000030	65000	00000		(65D) (VBR5)				ž	.00489	.00641	96100.	06900	20600.	.00876	.00846	
	(7) (M16E)				ē	4.00034	-,00032	00050	64000	1000	70100	-,00122		7) (M16E2				ē	17500	.00425	.00436	70500	.00607	.00684	.00743	
4	(B26C9F10r				X O	01100	.02036	16620	69900	04256	04754	04860		(B26C9F1DM				3	0.434	05230	.03115	03943	04536	80670	04870	
LA47 TABULATED DATA	CFHT 104 (LA-47) (BESCOFIDHF) (WISEESSO) (VSR5)				ć	15690	10690	D6628	07011		101.0	.07160		CFHT 1D4 (LA-47) (B26C9F1DM7) (M16E26SD) (V6R5)				ť	40	64.10	40570		07420	07427	.07441	
LA47 TM	CFHT			38/ 0	ð	18447	10000	*****	.37.666	. 35.004	28086.	1.01597		CFHT 1			39 / 0	ā	2	90101.	106.03.	40000		0.000	1.02307	
				RUN NO.	i	05.14	6010	20110	20010	01367	01477	-,01528					RV NO.	i	BETA	-5.11062	-5,15442	-5.17.69	-3.13066	967106-	-3,03469	
						V C	16.04	606.01	20.076	24.181	26.379	32.715								_	_				36.647	
						HOME !	000.01	10.350	10.330	10.330	10.330	10.330	10.93						¥U¥	10.330	10.330	10.330	10.330	10.330	10.330	

LA47 TABULATED DATA

		10.000				-	•				1.14692			10.000		S	1.40610	1.65066	1.65225	1.56210	1.43004	1.28646	1.14462
60	C DATA	ELEVTR # BOFLAP #		ខ	.11878	.16662	.23526	93339	.46667	.60470	.77547	â	DATA	ELEVTR = BDFLAP =		8	.12106	17170	.24453	.34164	.46545	.61194	.78666
(RHH009)	PARAMETRIC DATA	.000. .000.		J	16891	.27822	39319	.52522	.66434	.11922	96068.	(GHHO10)	PARAMETRIC DATA	000.26		ე	.17023	.28342	.40402	. 53370	.66561	.78723	.90042
		BETA # AILRON # SPOBRK #		Շ	00324	00252	00216	00208	00226	-,00289	-,00369			BETA = ALRON = SPOBRK =		č	.04703	.04500	.04382	.04219	.04300	.04023	.03969
ZG) (VBR5)				CYN	.00034	00000	.00024	.00024	65000	.00038	.00047	(6784) (N.	.00480	.00619	.00720	.00824	.00816	51600.	.00892
(7) (W19E				e e	.00013	.00042	69000	.00078	.00087	5,000	.00055	,) (w16E				é	.00516	.00559	.00633	.00727	.00863	.00932	.01033
(B26C9F10)				CH	03119	06650	-,05274	07355	.09943	-,12535	15643	(B26C9F10M				Ę.	95620	-,03999	05489	07472	-,09866	-,12639	16005
CFHT 104 (LA-47) (B28C9F10HP) (M118ER8) (VBR3)				5	.08142	.06290	.08662	\$6060.	.09621	01660.	.10198	CFHT 104 (LA-47) (826C9F10MP) (MA18E26) (VBRS)				ð	.08354	.08747	.09182	90560.	.09877	.10023	.10475
CFHT			0 / 19	ž	.18976	.31552	.44995	.61552	.80614	.98134	1.17676	CFHT 1			82 0	S	.19145	.31963	.46325	.62651	.80617	.99205	1,19105
			R. N.	BETA	04881	04813	04578	04748	-,04507	04365	04337				RUN NO.	BETA	-9.09661	-5.14007	-5,15488	-5.14120	-5.09632	-5.02770	4.92804
				ALPHA	11.695	16.104	19.998	24.016	28,281	32.047	36.083					ALPHA	11.846	15.903	19,972	23,995		32,089	36.116
				H)	10.330	10.330	10.330	10.330	10.330	10.330	10.330					HYCH	10.330	10.330	10.330	10.330	10.330	10.330	10.330

	RUN NO. BETA0021500352005520057100876
A. 070 070 070 070 070 070 070	76/0 CN .19998 .32928 .47141 .63430 .62477 1.01968
566666	76/ 0 19998 .0 32928 .0 47141 .0 63430 .0 62377 .0
	CN CN
ចស្តស្ត្រស	19998 .07 19998 .07 1974: .07 1937 .07 10.0988 .07
2 2 2 2 2 2 2	. 18988 . 32928 . 32928 . 0. 47141 . 0. 47141 . 0. 1988 . 0. 1988 . 0. 4717
2000000	. 32928 . 47141 . 63430 . 62377 . 01966 . 01966 . 01974
pn nn h- oo (00. 14714. 007. 007. 007. 007. 007. 007. 007. 00
n r o (70. 02459. 07. 625. 07. 07. 07. 07. 07. 07. 07. 07. 07. 07
	70. 70. 07. 07. 07. 07. 07. 07. 07. 07.
•	d t
Ć	. 23659 . DT
70	CENT 104
	41.0
·	•
,	
	-
∞ 1	
n	
	41 / 0 CN CA .21656 .07331 .35051 .07740 .59267 .08674 .69054 .09509

			1.447	LA47 TABULATED DATA	.					2	PAGE 7
			CFH1	CFHT 104 (LA-47) (BE&C9F10HP) (WA16E2632) (VBR5)	(BECSF10M) (M16E2	652) (VBR5)		(RHH013)	(3)	
									PARAMETRIC DATA	DATA	
								BETA # AILRON = SPOBRK =	. 000. 000. 55.000	ELEVTR = BDFLAP =	10.000
		RUN NO.	. 42/0								
¥	ALP!A	BETA	3	5	N O	ฮี	N.	5	J	8	Ş
10,330	12.055	-5.12879	.22687	.07586	00647	69500	67400	03910	.20602	.12157	1.69463
10.330	15.952	-5.16825	35995	41610.	00534	.00625	.00664	.03251	.32417	.17560	1.84609
10.330	20.171	-5.18070	.51788	.08412	00554	.00718	.00763	.02843	.45711	.25753	1.77496
10.330	24.288	-5.15942	.70924	90060.	01023	.00841	.00808	.02517	.60942	.37362	1.63026
10.330	28.472	-5.10614	.91229	.09654	01951	15600.	.00778	.02555	.75592	.51978	1.45431
10.330	32.561	-5.03174	1.10885	10036	-,02981	.01001	.00852	.02179	.88055	.68136	1,29233
10.330	36,552	-4.92882	1,32943	.10759	04519	.01118	.00816	.02059	1,00387	.87817	1.14314
			CFHT	CFHT 104 (LA-47) (828C9F10MF) (M118E26S2) (VBRS)	(626C9F10MF) (M16E26	S2) (VAR5)		(FHH014)	•	
								Q.	PARAMETRIC DATA	DATA	
								BETA =	000	ELEVTR =	-20,000
								AILRON =	000.	BDFLAP =	-11.700
		SCN NO.	75 / 0								
₩ CH	ALPHA	BETA	3	5	CLM	GP.	S.	۲	J	8	S
10.330	12.034	00303	.18799	.07013	-01605	00050	65000.	00291	.16923	.10778	1.57014
10.330	16.487	00469	.31901	.07271	.03697	-,00045	99000.	00159	.28526	.16026	1.77998
10,330	20.308	-,00629	.44610	.07364	.05477	00025	.00048	.0002	.39263	.22387	1,75474
10.330	24.464	00965	.60176	.07533	21110.	00050	66000.	.00067	.51654	.31777	1,62552
10.330	28.600	01198	.78044	.07820	.08515	.00034	.00110	.00112	.64778	.44225	1.46473
10.330	32.674	01298	.96045	.07814	•	00037	.00121	.00115	.76628	.58428	1.31149
10.330	36.851	01217	1.16496	16110.	07801.	00037	.00152	.00140	.88547	.76101	1.16355

•			-40.000		6,4	1.71194	1.71612	1.59992	1,44352	1.29170	1,15038			-40.000		ع	1.46283	1.70864	1.70002	1,59491	1.43984	1.28771	1.14703
PACE	2	DATA	ELEVTR = BOFLAP =		g)	.15386	.22333	.31686	.43746	.58357	.74756		DATA	ELEVTR = . BDFLAP = .		e	.11345	.15981	.22840	.32400	.44992	.59309	,75228
	(RHH015)	PARAMETRIC DATA	000.		٠,	.26340	.38326	50905.	.63148	.75379	86658	(RHH016)	PARAMETRIC DATA	000.8-		ل	.16596	.27305	.38829	.51675	.64782	.76373	.86289
			BETA = AILRON = SPOBRK =		ر ر	-,00331	00414	00534	00721	10600	-,01089		•	BETA = A1LRON = SPOBRK =		Č	.03945	.03260	.02975	.02764	.02749	.02362	.02248
	2652) (VBR5)				CYN	000038	•6000	29000.	19000.	0.000	.0008	(652) (VBR5)				N.C	.00478	.00700	11100.	.00833	.00816	.00915	.00877
	H7) (M16E				CBL	00051	00035	00065	-,00065	00068	00080	F) (W1652				é	.00360	.00417	.00501	.00587	\$6900.	.00722	.00800
4) (B26C9F10				3	02449	06019	.07744	57560.	12601.	12021.	(B26C9F10N				¥	02790	.04477	.06171	56870.	.09514	10908	.11809
LA47 TABULATED DATA	CFHT 104 (LA-47) (BEOCOFIONT) (MAIGEEOGE) (VORS)				5	.07575	.07633	.07837	.08112	.08223	.08293	CFHT 104 (LA-47) (@26C9F10MP) (M116E26SE) (V8R5)				ð	.07605	.07672	.07885	.08182	.08429	.08398	.08391
LA47 T	CFHT			43/0	S	.17611	43696	.59267	.76390	.94973	1,13645	CFHT			4/0	Z	18609	30694	.44353	.60441	.78421	.96332	1.14170
				RUN NO.	BETA	-,02091	01699	02105	02025	-,01960	01929				R. N.	BFTA	-5.09133	-5.13522	-5.14628	-5,12784	-5.07776	-5.00470	19668.
					ALPHA	12.096	20.321	24.474	28.651	32,798	36.826					414							
					HYCH	10.530	10.530	10.330	10.330	10,330	10.330					7	10.330	10,330	10,330	10.330	10,330	10.330	10.330

CFHT 104 (LA-47) (BEBCSF10H7) (MISERSS1) (VBR3) PARAMETRIC DAIR PARAMETRIC DA				LAA7 TI	LA47 TABULATED DATA						•	PAGE .
RUM NO. 79 / D				CFHT	104 (LA-47)	(826C9F10M) (W16E	2651) (VGR5)		(RH#HD)	13	
RUM NO. 79 / D RUM NO. 60.51 01643 01643 00164 00259 00252 00259										PARAMETR10	DATA :	
RUM NO. 79/ D									Z ¥	000.	ELEVTR = BDFLAP =	10.000
E06346 .21990 .0046301460 .00012 .0002600299 .20170 .46260 .00414 .39944 .0063101543 .00036 .0003900170 .46260 .20474 .39944 .0063101543 .00036 .0003900170 .4626006104 .69945 .09449 .006350036001700020900170 .4626006104 .69945 .0964903916000390019000171 .6009701544 .09946 .0994903916000330002900177600900170002000017760090001700020000170000090017000009001700000900170000090017000009001700000900170000090017000009001860000900186000090018600186000090018600186000000018600018001860018600186001860018600186001860			RUN NO.									
### CEL ### CHAPTER CONSTREET CONTREE		ALPHA	BETA	3	ð	CLM	G	S	Շ	J	8	5
## CETA .35944 .06831 01863 .00036 .00039 00209 .32642 ##06377 .51982 .07169 01843 .00030 .00018 00170 .46260 ##06377 .51982 .07169 03016 .00030 .00031 .00033 .74352 ##06144 .68936 .08931 03916 .00039 .00033 00073 .74352 ##05970 1.09946 .09049 03916 .00033 00017 .86060 ##05970 1.50966 .09653 07947 .00020 .00038 00117 .86060 ##05970 1.50966 .09653 07947 .00020 .00038 00117 .86060 ##05903 1.50966 .09653 07947 .00020 .00166 .99698 ##05903 05966 .09653 01265 .0043 .00614 .04015 .20234 .0004 .00614 .04015 .20234 .00043 .00614 .04015 .20234 .00067 .03521 .00067 .03521 .00067 .03521 .00067 .03521 .00067 .03521 .00067 .00067 .03521 .00067		11.952	06348	.21990	.06485	-,01460	21000.	.00026	-,00259	.20170	.10698	1.85073
##06577 .51962 .0716901643 .00050 .0001600170 .46260 ###06104 .69959 .0905503016 .00069 .0000900121 .60097 ###06104 .69956 .0951204276 .00069 .000090017 .96080 ###06104 .69956 .0904903916 .00033 .000250017 .96080 ###06104 .69956 .0904903916 .00033 .000250017 .96080 ###06104 .69956 .0904903916 .00030 .000360017 .999698 ###06104 .09946 .0904909947 .00020 .0003600166 .999698 ###		16.072	06474	35944	.06851	-,01563	.00036	.00033	00209	.32642	.16534	1.97421
##06149 .69459 .0905503016 .00069 .000090017 .4332 ##05970 1.09946 .0904905916 .00003 .000050017 .66060 ##05970 1.09946 .0904905916 .000030 .000020017 .66060 ##05970 1.09946 .0964905916 .000030 .000020017 .66060 ##05903 1.30966 .0965307947 .00020 .0003600166 .99698 CFHT 104 (LA-47) (RZ6C9F1047) (MA16EZ6S1) (V6R5) RUN NO. 60, C RUN NO. 60, C ## CLM CR CLM CBL CYN CY CL -5.12513 .22131 .0669301265 .00643 .00614 .00195 .202345.12612 .52163 .0760201372 .00771 .006792 .03563 .331615.16912 .52163 .0760201372 .00771 .00677 .03563 .331615.10916 .90554 .0081302927 .00677 .00677 .00567 .03564 .755245.10916 .90554 .0981904369 .01014 .00679 .03669 .99909 .		20.314	06377	51982	07169	-,01843	00000	.00018	00170	.46260	.24769	1.86763
##06104 .68636 .0831204276 .00009 .0000900017 .86080 .00030 1.09946 .0904905916 .00033 .0002500117 .86080 .99698 .09593 1.30966 .0965307947 .00020 .0003600116 .99698 .99698 .09653 1.30966 .0965307947 .00020 .0003600166 .99698 .99698 .00039 1.30966 .0965307947 .00020 .0003600166 .99698 .99698 .00043 .00043 .00043 .000614 .04015 .20234 .95.000 .0710601372 .00741 .000792 .03623 .33161 .95.1693 .00742 .03623 .03524 .05533 .95.1693 .00720 .00343 .000647 .00367 .03524 .45350 .95.1693 .00043 .00067 .03524 .35524 .95524 .9510918 .90534 .05236 .01113 .000873 .03469 .99999 .99999 .99999		24.129	-,06149	69459	.08055	03016	69000	60000	-,00121	16009.	.35746	1.68121
## CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (V6R5) FARAFTRIC DATA CFHT 104 (LA-47) (@26C9F10MT) (M16E2631) (M16E2		28.228	06104	88938	.08512	-,04278	69000	00000	00073	.74352	.49576	1,49977
CFHT 104 (LA-47) (R26C9F10M7) (M416E26S1) (V6R5)		32.315	02650	1.09946	09049	-,05916	.00033	.00025	00117	CSCOSO.	.66422	1.32608
CFHT 104 (LA-47) (B26C9F10MT) (MA16E26S1) (VBR5) (RH+018)		36.402	05903	1.30986	.09653	-,07947	.00020	.00038	00186	86966.	.65503	1.16601
RLM ND. 80, D SPORTK = -5,000 ELE AILFON = .000 EDF AILFO				CFHT	104 (LA-47)	(826C9F10MF) (M16E2)	6 <u>5</u> 1) (V8R5)		(RHH-01	a	
BETA CN CA CLM CBL CYN CY CL CL CN CA CLM CBL CYN CY CL ST.000 EDF CAILES CO. CO. CO. CLM CBL CYN CY CL CL CN CA CLM CBL CYN CY CL CL CN CA CLM CBL CYN CY CL CN CA CLM CBL CYN CY CL CN										PAGAMETRIC	DATA	
RUN NO. 80, D RUN NO. 80, D BETA CA CLM CBL CYN CY CL -5.12213 .22231 .0689301285 .00614 .04015 .20234 -5.16893 .35608 .0710601372 .00771 .00792 .03563 .33181 -5.16893 .35608 .0710601372 .00771 .00792 .03564 .46360 -5.16893 .35608 .0710601372 .00784 .00367 .03564 .46360 -5.16893 .35608 .0818302927 .00784 .00867 .03514 .75524 -5.10916 .90534 .0681506026 .01113 .00873 .03669 .66008 -4.92106 1.31581 .0994608173 .01255 .00740 .03666 .99909									•	7117	<u> </u>	
RUN NO. 80/ D SPORTK = 55.000 SPORTK = 55.0000 SPORTK = 55.000 SPORTK = 55.0000 SPORTK = 55.00000 SPORTK = 55.0000 SPORTK = 55.0000 SPORTK = 55.0000 SPORTK = 55.00000 SPORTK = 55.000000 SPORTK = 55.000000 SPORTK = 55.000000 SPORTK = 55.0000000 SPORTK = 55.0000000 SPORTK = 55.0000000000000000000000000000000000										-5.000	ELEVTR =	10.000
BETA CN CA CLM CBL CYN CY CL CL CYN CY CL CL CYN CY CL CL CYN CY CYN CY CL CYN CY CONST CONSTANT CONSTA									7.	000.	EDFLAP =	16.300
BETA CN CA CLM CBL CYN CY CL CL CYN CY CL CL CYN CY CASOB CYTORS COTOR COT									אַספונא -	200.00		
BETA CN CA CLM CBL CYN CY CL -5.12513 .22131 .0669301285 .00643 .00614 .04015 .20234 -5.1693 .35608 .0710601372 .00771 .00792 .03623 .33181 -5.16012 .52165 .0760201963 .00774 .00667 .03564 .46360 -5.1625 .70008 .0816302927 .00677 .00907 .03521 .60533 -5.10918 .90554 .0861504385 .01014 .00867 .03614 .75524 -5.03255 1.10007 .0923006026 .01113 .00873 .0366 .99909			R. NO.	90/0								
-5.12513 .22131 .0669301269 .00643 .00614 .04015 .20234 .20234 .5.16693 .36608 .0710601372 .00771 .00792 .03623 .33161 .5.16012 .52169 .0710601363 .00764 .00667 .03564 .46360 .5.16215 .70008 .0816302927 .00877 .00907 .03521 .60533 .5.10918 .90554 .0861504365 .01014 .00867 .03614 .75524 .5.03255 1.10007 .0923006026 .01113 .00873 .03469 .86008 .4.92106 1.31581 .0994608173 .01255 .00740 .03666 .99909		AHQ 1	PF TA	Z	ð	X	é	ž	Շ	7	9	S
-5.16693 .36608 .0710601372 .00771 .00792 .03623 .33161 -5.16012 .52165 .0760201963 .00784 .00867 .03564 .46360 -5.16255 .70008 .0816302927 .00877 .00907 .03521 .60533 -5.10918 .90554 .0881504385 .01014 .00867 .03614 .75524 -5.03255 1.10007 .0923006026 .01113 .00873 .03669 .86008 -4.92106 1.31581 .0994608173 .01255 .00740 .03666 .99909		006.1	-5.12513	.22131	.06893	01285	.00643	.00614	.04015	.20234	.11309	1,78921
BETA CN CA CLM CBL CYN CY CL CD CDFLAP = 15.000 ELEVTR = 1 55.000 -5.12213 .22131 .0669301265 .00643 .00614 .04015 .20234 .11309 -5.16693 .35608 .0710601372 .00771 .00907 .03523 .33161 .17020 -5.16255 .77008 .0816304365 .00677 .00907 .03564 .75524 .35732 -5.0732 -5.03255 1.10007 .09287 .00877 .00877 .03967 .03564 .75524 .50732 -5.03255 1.10007 .09287 .00873 .00873 .00874 .75524 .50732 -5.03255 1.10007 .0928006026 .00113 .00873 .03566 .99909 .865201 .865201		6.170	-5.16893	.36608	.07106	01372	.00771	.00792	.03623	.33161	.17020	1.94954
		133	-5.18012	.52165	.07602	01963	.00784	.00867	.03564	.46360	.25095	1,84736
		14.149	-5.16255	. 70008	.08183	02927	.00877	20600 .	.03521	.60533	.36109	1.67643
		8.330	-5.10918	.90554	.08815	-,04385	.01014	.00867	.03614	.75524	. 50732	1.48868
		2,339	-5.03255	1.10007	.09230	06026	.01113	.00873	.03469	.88008	.66643	1.32058
	-	6.464	-4.92106	1,31581	.09948	08173	.01255	.00740	.03666	60666.	.86201	1.15902

Petral P			LAA7 TJ	LA47 TABULATED DATA	₹						PAGE 10
No. 177 D			CFHT	104 (LA-47)	(B26C9F10H	(F) (M16E)	2651) (V6R5)		(RHHD)	6.	
BETA 1,000									PARAMETRIC	: DATA	
### PETA CA CLM CBL CYN CY CL CD322 :16682 :09947 1 00276								Z ×	000.	ELEVTR = BDFLAP =	-40.000
Character Char		RUN NO.									
			,	į	;	ē	3	č	ป	8	ያ
002676 .17801 .05513 .01516 .00024 .00024 .00026 .20263 .27242 .14662 .10023 .000240 .00024 .00025 .26669 .21226 .120239 .00637 .00637 .00023 .0002600171 .31013 .30669 .21226 .00037 .00025 .0002600167 .53013 .30669 .21226 .00037 .0002500167 .53014 .4300700037 .0002200167 .53014 .4300700310 .00031 .00034 .0003400037000370003700037000370003700037000370003700037000370003700037000370003100239000310023900031002390003100239000310023900031002390003100037		BETA	Z .	Y		רטר - החחות -	1 000	00332	.16082	.09947	1.61673
00262 .30243 .06575 .05189 .00024 .00026 .00026 .36466 .21236 100236 .35244 .05675 .0451600024 .00026 .00027 .35113 .30689 100317 .76524 .07326 .0661700027 .00026 .00037 .55116 .36679 100417 .76524 .07326 .0661700027 .00027 .00163 .75316 .36679 100697 .94154 .07326 .06617 .00037 .00067 .00039 .66428 .75326 .366428 .75826 100691 1.13429 .07417 .0681000193 .0006100239 .66428 .75826 100691 1.13429 .07417 .0681000193 .0006100239 .66428 .75826 100691 1.13429 .07417 .0681000193 .0006100239 .66428 .75826 100692 .00602		00276	17801	ersen.	97710.	1000	09000		.27242	.14662	1.85794
00235 .59215 .00595 .00507 .00023 .00024 .00101 .51013 .30669 100336 .59215 .00596 .00597 .00036 .00034 .00167 .53716 .43007 100697 .94154 .07336 .00597 .00036 .00032 .00163 .75316 .56975 100697 .94154 .07336 .07417 .00510 .00032 .00039 .66428 .75326 .56975 100691 1.13425 .07417 .0631000103 .00031 .00239 .66428 .75828 100697 .94154 .07336 .07417 .00310 .00031 .00239 .66428 .75828 100697 .94154 .00317 .00310 .00483 .00687 .000	ø	00262	30243	61690.	calch.		95000	- 00205	38486	.21236	1.81225
00697 .76524 .07266 .0691700067 .0003400163 .75316 .56973 100697 1.13425 .07726 .07326 .00067 .00067 .00063 .75316 .56973 100691 1.13425 .07417 .0831000103 .0006100239 .66428 .73828 100691 1.13425 .07417 .0831000103 .0006100239 .66428 .73828 100691 1.13425 .07417 .0831000103 .0006100239 .66428 .73828 100691 1.13425 .07417 .08310 .04162631) (V6R3) (GH+G20) RUN ND, 76 C C C C C C C C C C C C C C C C C C	2	00235	43446	.06675	9.690	-,0006	82000	00171	.51013	.30869	1.65258
00417 .76524 .07326 .00417 .00005 .00005 .75316 .56973 .75316 .7582600697 .007417 .006310 .00006 .0000500163 .75316 .7582675826758267582607417 .00631000103 .0006100239 .66426758267582600691 1.1342507417 .006310001030006100239664267582600691 1.1342004100239004230000006100239000	N	00338	. 59215	6860.	nescn.	2000	45000	00167	63718	43007	1,48159
-,00667 ,94154 ,07336 ,07417 ,08310 -,00105 ,00081 -,00239 ,86428 ,73828 -,00691 1,13425 ,07417 ,08310 -,00105 ,00081 -,00239 ,86428 ,73828	o	00417	.76524	.07326	1000.	econo-	5000	. 00163	75316	.56975	1.32191
FILM NO. 76 / 0 BETA CA CLM CBL CYN CY CL CD	-	16900	.94154	.07336	20820.	10000°-	10000	00239	.86428	.73828	1.17067
CFMT 104 (LA—47) (B26C9F10MT) (M116E2651) (V6R5)	n	-,00891	1.13425		nicon.						
RUN NO. 76 / D RUN NO. 76 / D BETA = -5.000 ELEVIR = -1 ALLEON = .000 BOF.AP = -1 SFOBRK = 55.000 SFOBRK = 55.000 BOF.AP = -1 SFOBRK = 55.000 BOF.AP = -1 SFOBRK = 55.000 BOF.AP = -1 SFOBRK = 55.000 SFOBRK = 10000 BOF.AP = -1 SFOBRK = 55.000 BOF.AP = -1 SFOBRK = 55.000 SFOBRK = 10000 BOF.AP = -1 SFOBRK = 55.000 SFOBRK = 10000 BOF.AP = -1 SFOBRK = 10000 BOF.AP = -1			CFHT	104 (LA-47)	(BZ6C9F10M	7) (M16E2	:651) (VBR5)		(RHHD2	ĝ	
RUN NO. 78/ 0 BETA CN CA CLM CBL CYN CY CL CD -5.09687 - 35.000 BETA CN CA CLM CBL CYN CY CL CD -5.09687 .18068 .00483 .00684 .04003 .16248 .10432 -5.14042 .30955 .06617 .03447 .00558 .00691 .03662 .39569 .22090 -5.15351 .44591 .07036 .04753 .00566 .00997 .03667 .31719 .31460 -5.1344 .60096 .07270 .06052 .00965 .03567 .31719 .31460 -5.08469 .77055 .07431 .07121 .00762 .00957 .03664 .76055 .57814 -5.00842 .95236 .07538 .07699 .00830 .00927 .03664 .76055 .57814									PARAMETRIC	DATA	
RUN NO. 78/0 BETA CN CA CLM CBL CYN CY CL CD -5.09687 .16062 .06627 .01989 .00483 .00634 .04005 .16248 .10432 -5.14042 .30955 .06617 .03447 .00553 .00611 .03662 .27645 .15144 -5.15351 .44591 .07036 .04753 .00656 .00697 .03662 .39369 .22090 -5.15354 .60098 .07270 .06052 .00652 .00955 .03567 .51719 .31460 -5.08469 .77055 .07431 .07121 .00762 .00957 .03564 .76055 .57614 -5.0842 .95236 .07538 .07769 .00637 .00626 .03706 .66132 .74400								X ×	.s. 000 .000 .ss. 000	ELEVTR = BDF.AP =	-40.000
BETA CN CA CLM CBL CYN CY CL CD		RGN NO.									
-5.09687 .16062 .06627 .01969 .00463 .00634 .04005 .16246 .10432 .15144 .2.14042 .350955 .06617 .03447 .00523 .00611 .03662 .27645 .15144 .2.15351 .44591 .07036 .00566 .00697 .03662 .39369 .22090 .2.15354 .60096 .07270 .06052 .00652 .00965 .03567 .51719 .31460 .2.16469 .77055 .07431 .07121 .00762 .00957 .03566 .64132 .43357 .2.1646 .2.15350 .07595 .00632 .00957 .03664 .76055 .57614 .2.15930 .07652 .00957 .00626 .03706 .66620 .74400		i	ā	ć	1	ē	Ž	۲	ન	9	ያ
-3.19587 .15052 .27645 .15144 .15052 .27645 .15144 .151642 .27645 .15144 .151642 .21645 .15144 .151642 .30555 .00566 .00697 .03662 .39369 .22090 .2515351 .44591 .07036 .00565 .00565 .00367 .03662 .39369 .22090 .251545 .60968 .07270 .06052 .00652 .00965 .03567 .51719 .31460 .5.08469 .77055 .07431 .07121 .00762 .00957 .03564 .76055 .57814 .5.0842 .95236 .07599 .00830 .00957 .03664 .76055 .57814 .260620 .07632 .00957 .00626 .03706 .86620 .74400		DC 14	200	26037	01080	00483	00634	.04005	.16248	.10432	1.55760
-5.15351 .44591 .07036 .00456 .00497 .03662 .39369 .22090 .5.15351 .44591 .07036 .00456 .00465 .00467 .03667 .51719 .31460 .5.13454 .60098 .07270 .06052 .00552 .00957 .03568 .64132 .43357 .5.108469 .77035 .07431 .07121 .00762 .00957 .03568 .64132 .43357 .5.10842 .95236 .07589 .00430 .00957 .00626 .03706 .86620 .74400 .4.69762 1.13930 .07632 .00957 .00626 .03706 .86620 .74400		1908D.C-	10001	1000	7447	00523	.00811	.03662	.27845	.15144	1,63661
-5.15551 .44591 .01050 .00652 .00965 .01567 .51719 .31460 .5.15454 .60986 .04132 .43557 .5.10846 .04132 .43557 .5.108469 .77055 .07431 .07121 .00762 .00957 .01568 .64132 .43557 .5.10842 .95236 .07589 .00830 .00957 .03664 .76055 .57814 .4.89782 1.15930 .07632 .08133 .00957 .00026 .03706 .86620 .74400		-5.14042	66806.	1000.	0.4743	99500	76800	.03662	.39369	.22090	1.78216
-5.13454 .60098 .U7270 .U6022 .U052 .0550 .4132 .43557	_	10001.6-	TRC++	950.0		2	19000	.03567	.51719	.31460	1,64395
-5.08469 .77055 .07431 .07121 .00752 .0537 .0564 .76055 .57814 .5.00842 .95236 .07538 .07769 .00830 .00927 .03664 .76055 .74400 .4.89782 1.13930 .07632 .08133 .00857 .00826 .03706 .86620 .74400	_	-5.13454	86009.	ureru.	Schen.	3000.	28000	93560	.64132	43357	1.47917
-5.00842 .95236 .07538 .07789 .00834 .00826 .03706 .86620 .74400	M	-5.08469	.77055	.07431	12170.	2010.	10000	13664	76055	.57814	1,31551
-4.89782 1.13930 .07632 .00133 .00937 .00828 1.13930 .07632	6	-5.00842	.95236	.07538	.07789	neann.	72500.	10000.	96620	74400	1.16424
	•	-4.89782	1.13930	.07632	.08133	16600.	opann.	20.50			•

CA	
ALLRON = .0000 ELEVTR = -1 SPOBRK = 55.000 00242	
CY CL CO00242180661120000171 .303501806400056 .42303 .2407600053888398407400053888398216300119 .94090 .8043300119 .000 ELEVTR = 10 ALLEON = .000 ELEVTR = 10 ALLEON = .000 BUFLAP = 16 SPOERK = 35.00000312195121172600397220311764700508 .440902507000697581353591700693 .72508 .86602 1	
CY CL CD0024E .11200 .11200 .11200 .11200 .11200 .11200 .11200 .11200 .11200 .11200 .11200 .11200 .11200 .11200 .11200 .11200 .12200	RUN NO. 73/ 0
0024E1806611200 001713035018604 00058 .42303 .24076 0005388839824076 0005388839824076 001199409080433 001199409080433 00119000 ELEVTR = 10 AILRON = .000 EDELAP = 10 ATLRON = .000 EDELAP = 10 SPOBRK = 35.000 EDELAP = 10 0031E1951E11726 003973203117647 005075813535917 1 00693 .7250880524 1 010948620366802 1	20
00171 .30350 .16604 00056 .42303 .24076 00053 .68859 .44764 00053 .68859 .44764 00119 .94090 .62163 00119 .94090 .62163 AILRON = .000 ELEVTR = 10 AILRON = .000 BUFLAP = 10 SPOERK = 35.000 BUFLAP = 10 00312 .19512 .11726 00397 .32031 .17647 00508 .44090 .25070 1 00693 .72508 .35917 1 00693 .72508 .66602 1 01294 .66203 .66602 1	4000
00056 .42303 .24076	9888
00053 .68859 .46784 00053 .68859 .46784 000139 .94090 .62165 00119 .94090 .62165 ALLRCN = .0000 ELEVTR = 11 ALLRCN = .0000 EOFLAP = 15 SPOBRX = \$5.000 .25070 00312 .19512 .11726 00357 .52031 .17647 00593 .72508 .50254 00693 .72508 .66602 01298 .86205 .66602	8000
00053 .68859 .46764 00065 .81899 .62165 00119 .94090 .60235 (GHHG22) RARAMETRIC DATA BETA = .000 ELEVTR = 11 AILRCN = .000 BOFLAP = 14 SPOBRX = \$5.000 00312 .19512 .11726 00312 .35031 .17647 00593 .72508 .50254 00693 .72508 .50254 01298 .86205 .66602	64436
00065 .81899 .62165 00119 .94090 .60435 (GHH022) RARAMETRIC DATA BETA = .000 ELEVTR = 11 AILRCN = .000 BOFLAP = 16 SPORRX = 55.000 BOFLAP = 16 00312 .19512 .11726 00312 .19512 .11726 0059 .35031 .17647 00693 .72508 .50254 01094 .86205 .66602 01298 .96166 .85628	.82841
00119 .94090 .6043500119 .94090 .60435 BETA = .0000 ELEVTR = 1 ALLRCN = .0000 BOFLAP = 1 SPORRK = 55.000 BOFLAP = 1 SPORK = 55.000 BOFLAP = 100312 .19512 .1172600312 .19512 .117260059	1.02488
(GH+G22) PARAMETRIC DATA BETA = .000 ELEVTR = 1 ALLCCN = .000 BOFLAP = 1 SPOBRK = 55.000 CY CL CO00312 .19512 .1172600357 .32031 .1764700508 .44090 .2507000508 .44090 .2507000508 .86205 .3591700693 .72508 .5025401298 .86205 .66802	
CBL CYN CY CL CO ELEVTR = 1 SPORR = .000 ELEVTR = 1 SPORK = .000 BOFLAP = 1 SPORK = .000 BOFLAP = 1 SPORK = .0001 BOFLAP = 1 SPORK = .0001 BOFLAP = 1 SPORT	CFHT 104 (LA-
CBL CYN CY CL CO CDC CLEVTR = 1 SPORTR = 1 SPORTR = 55.000 BOFLAP = 1 SPORTR = 55.000 BOFLAP = 1 SPORTR = 1 SP	
CBL CYN CY CL CD00011 .0003600312 .19512 .1172600001 .0002900397 .32031 .1764700001 .0002900508 .44090 .2507000004 .0000000657 .56135 .3591700019 .0001300693 .72508 .502540004 .0001001094 .66205 .6660200090 .0002101298 .98166 .85528	
CBL CYN CY CL CD	RUN NO. 67/ 0
0001 .000290037 .32031 .17647 00001 .0002900397 .32031 .17647 00001 .0002900508 .44090 .25070 00004 .0000000657 .58135 .35917 00019 .0001300893 .72508 .50264 00044 .0001001094 .86205 .66802 00090 .0002101298 .98166 .85528	80 NO
-,00001 .00029 -,00397 .32031 .17647 -,00001 .00029 -,00508 .44090 .25070 .25070 .00004 .00000 -,00657 .58135 .35917 -,00019 .00013 -,00893 .72508 .50254 .00044 .00010 -,01298 .86205 .86528 .	2 .21510
00001 .0002500508 .44090 .2507000004 .0000000657 .58135 .3591700019 .0001300893 .72508 .5025400044 .0001001094 .86205 .6680200090 .0002101298 .98166 .85628	
-,00004 ,00000 -,00657 ,58135 ,35917 -,00019 ,00013 -,00893 ,72508 ,50254 -,00044 ,00010 -,01094 ,86205 ,66802 -,00090 ,00021 -,01298 ,98166 ,85628	.00782 .50007 .08469
00019 .0001300893 .72508 .50254 00044 .0001001094 .86205 .66802 00090 .0002101298 .98166 .85628	
00044 .0001001094 .86205 .6680200090 .0005101298 .98166 .85628	87686
00090 .0002101298 .98166 .85628	1.06590
	1,29840

PAGE 12			10.000		5	1.67414	1.65024	0.147.1	1.44216	1.28651	1.13779				-40,000		ع	1.41848	1.68110	1.68145	1.56400	1.42542	1.28154	
2	ŝ	: DATA	ELEVTR = BOFLAP =		8	.12331	17661	60662.	50878	67122	.86525		s	DATA	ELEVTR = BOFLAP =		9	.10825	.15428	.21636	.31108	.42130	.55530	
	(RHH023)	PARAMETRIC DATA	000.		ე	.20644	.32253	45126	73375		.98447		(RH#+024)	PARAMETRIC DATA	000. 000. 85.000		J	.15355	.25936	36380	.48654	.60053	.71164	
			BETA # AILRON # SPOBRK #		č	.03803	.03168	.02973	66750.	BESSO.	.02384				BETA = AILRON = SPOBRK =		ڻ	-,00299	-,00383	00479	00596	-,000820	00965	
	2650) (V6R5)				Z.	.00538	.00763	.00821	.00843	61900	\$6900.		265D) (VBR5)				N.	65000	.00024	\$1000.	-,00002	.0001	•0000	
,	HFCS) (M16E				G	.00519	.00569	20900	.00705 .0000	.000	.01040		47CS) (W16E				ව්	00032	00030	00034	-,00051	00072	-,00102	
Y.) (B26C9F1C				F G	00741	00507	00750	01286	-,02243	05273	,	(826C9F10				ž	.02309	.03942	.05477	.07202	.08569	50660.	
LA47 TABULATED DATA	CFHT 104 (LA-47) (BZeCeF10MFC3) (M16EZeSO) (VBR3)				ð	.07748	.08073	.08697	09260.	62860.	10337		CFHT 104 (LA-47) (B26C9F1DM7C3) (hA16E265D) (VBR5)				5	.07365	.07454	.07684	.07955	.08231	.08283	
1.447	CFHT			. 46/ 0	ક	.22764	.35875	. 51303	.69346	.88747	1.08883		CFHT			45/0	ž	.17283	.29242	.41624	57198	72894	.89884	
				R. K.	BETA	-5.10074	-5.14472	-5.15746	-5.13314	-5.08434	-5.00318					RGN ND.	BETA	-,00575	00401	00224	00161	28.60900157 .72894 .08231 .0856900072 .0001100820 .60053 .42130 .52.70000085 .89884 .08283 .099020000400965 .71164 .55530 .		
					ALPHA	12.053	16.022	20.241	24.240	28.422	32.435						Al PHA	12.101	16.446	20.282	24.67600161 .57198 .07955 .07202000510000200596 .48654 .31108 28.60900157 .72894 .08251 .0856900072 .0001100820 .60053 .42130 32.70000085 .89884 .08283 .0990200102 .0000400965 .71164 .55530			
					HYCH	10.330	10.330	10.330	10.330	10.330	10.330						1	10.330	10.330	10.330	10 330	10.330	088 01	1 1 1 1 1 1 1

PAGE 13			2 = -40.000			_	-		-			71925 1.13626			10,000				ع		_	_	•	-		.88807 1.13167
	(RHH025)	PARAMETRIC DATA	S ELEVTR = S BOFLAP =		8		Ī				•	•	(RHH026)	IC DATA	ELEVTR				8							
	E	PARAMETI	000.		3	.15689				·	.72164	.81726	Ė	PARAMETRIC DATA	000		98.000		J	.20992	.32609	.46469	59970	.74111	.87268	1.00501
	=		BETA = AILRON = SPOBRK =		5	.03816	.03288	.03030	.02615	.02776	.02699	.02507	_		BETA =	z	SPORTK =		Շ	00177	00131	00053	00011	00008	00003	00038
	52650) (VBR ⁵				Š	.00490	.00712	.00000	.00851	.00831	.00776	.00726	265D) (VBR5						Š	.00025	.00026	.00027	*0000	.00003	.00010	.00017
	CFHT 104 (LA-47) (BZ6C9F10H7C3) (M16EZ650) (V8R5)				ë	.00292	.00334	.00356	.00446	.00554	.00647	60400	CFHT 104 (LA-4T) (B26C9F10MTC4) (M16E26SD) (V8R5)						ē	00000	61000.	.00040	.00053	.00052	.00014	-,00001
¥1.	7) (B26C9F1				¥	.02558	.04157	.05702	.07295	.08783	55660.	10699) (B26C9F1(Z C	00486	00138	.00149	\$6000	00670	01332	02599
LA47 TABULATED DATA	T 104 (LA-4)				5	07504	.07620	96640.	.08229	.08435	.08512	.08528	104 (LA-47						2	.07588	.06212	.08854	.09531	.10155	.10549	.11196
LAA7	£ 5			. 46/ 0	Z	17639	28940	.42230	57104	.73877	91319	1.08534	CFH					0 / 10	Ž	.23124	36296	60625.	.70032	89736	1.10017	1,33648
				RUN NO.	AT 38	-5.11518	-5.16492	-5.17651	-5.16111	-5.11126	-5.02850	4.92479						RUN NO.	A + 1913	07611	07955	07758	07575	-,07473	-,07409	-,07562
					AHO IA	120.02	16.201	20.364	24.293	28.663	32.784	36.858							476	12.228	16.054	20.477	24.201	28.394	32.375	36.677
					1	330	10.330	10.330	066.01	10.330	10.330	10.330							7	10.330	10.330	10.330	10.330	0.330	0.330	0.330

			1 1447 1	LA47 TABULATED DATA	4					Ĭ	PAGE 14
			CFHT	CFHT 104 (LA-47) (B26C9F10HFC4) (M116E2650) (VBR5)	(B26C9F10)	HPC4) (W16E)	2650) (VBR5)		(RHH027)	27)	
									PARAMETRIC DATA	C DATA	
								BETA = AILRON = SPOBRK =	000.8-	ELEVTR = BOFLAP =	10.000
		RUN NO.	0 /99 .								
H)	ALPHA	BETA	S	క	G.	G	CyN	Շ	J	8	8
10.330	11.993	-5.10047	.22760	.07877	00280	.00514	.00524	00650.	.20646	12458	1.65965
10.330	16,085	-5.14338	.36697	.08422	.00034	.00567	.00686	.03613	12626.	00301.	******
10.330	20,160	-5.15845	.52419	90060.	•00200•	.00587	16100.	.03424	.46103	22692.	10001.1
10.330	24.299	-5.14439	.71504	.09692	00067	00810	.00887	46550	19110.	16396.	04664
10.330	28.425	-5,09602	90606.	.10184	00663	00800	.00867	.03419	860c.	63336.	
10.330	32,528	-5.01295	1.11444	.10769	01607	.00935	.00818	.03403	.88171	ennes.	1,67773
10,330	36.767	-4.89821	1.34486	.11479	03091	.01110	7 6900.	.03534	1.00863	89693	1.12453
			CFHT	CFHT 104 (LA-47) (B26C9F10HFC4) (M116E265D) (V6R5)	(B26C9F10H	AC4) (M16E2	(\$5D) (VBR5)		(RHH028)	(8)	
								•	PARAMETRIC DATA	DATA	
										1	9
								BETA =	3 8	ELEVIK =	-11.700
									98.000		
		RUN NO.	0 /69 .								
3	AL DELA	BETA	Z	ð	Ä	_ව	Z.	5	7	e	5
0.0	120	D4324	18566	.07676	20620.	00041	.00042	-,00246	.16556	.11381	1.45477
10.330	16.219	-,04286	31707	76090	.04793	00028	.00049	00189	.28184	.16631	1.69472
10.330	20.670	04456	.46741	.08355	.07020	-,00032	.00055	-,00129	.40783	.24316	1.67721
10.330	24.500	04345	.62284	.08775	.08877	00045	.00046	00067	.53037	.33814	1.56849
10.330	28.611	-,04337	.79541	65060.	.10659	-,00060	.00058	00050	.65504	.46019	1.42341
10.330	32,811	04475	.97955	.09113	.12343	26000'-	.00080	00084	. 17389	.60738	1.27415
10.330	36.955	04730	1,17859	.09114	.13723	00101	\$6000.	00057	. 88702	.78139	1.13519

LA47 TABULATED DATA

		-40.000		5	1.45157	1.66271	1.67238	1.56560	1.41821	1.27148	1,12955			16.300		ع	1.61784	1.77847	1.75033	1.61761	1.45061	1.29396	1.14471
ê	DATA	ELEVTR = .		e	.11580	.16745	.24255	.34029	.46622	.61403	.78722	_	DATA	ELEVTR = BDFLAP =		8	.11505	.16631	.23845	.34236	.47588	.62939	.81436
(RHH029)	PARAMETRIC DATA	000.		7	.16609	.28177	.40564	.53276	.66119	.78073	.88920	(RHH030)	PARAMETRIC DATA	000.		J	.18614	.29578	.41737	.55381	.69031	.81441	.93221
		BETA = AILRON = SPOBRK #		5	.03743	.03742	.03509	.03386	.03550	.03575	.03729		•	BETA = AILRON = SPOBRK =		Ն	00423	00527	-,00693	00861	01078	01303	01475
CFHT 104 (LA-47) (BEGC9F10HTC4) (M116E2650) (VBR5)				Cys	.00686	.00744	76900.	16600.	19600.	11600.	.00809	65D) (VBR5)				S.S.	00054	00063	00078	00089	16000	16000	26000
9C4) (M16E				GB	.00244	.00352	.00379	.00448	62500.	.00655	.00771	7) (M16E2				GPL	90000	.00003	.00007	40000	00008	00018	-,00048
(B26C9F10)				CH	.03045	.04978	.07112	59060.	.10619	.12315	.13323	(B2 C9F10M				F.	00924	01725	02609	03960	05752	-,07797	10273
104 (LA-47)				ర	.07615	.08235	76690.	80690.	97060.	.09217	41660.	CFHT 104 (LA-47) (82 C9F10M7) (M16E265D) (VBR5)				5	.07393	.07631	.08109	.08587	.09225	10160.	.10228
CFHT			70, 0	Š	.18857	.31725	.46474	.62585	. 80393	96896	1.18394	CFHT 1			0 /64	S	.20596	.33017	.47380	.64540	.83336	1.02468	1,23359
			RGN NO.	BETA	-5,13979	-5.18181	-5.19621	-5.18451	-5,13375	-5,05365	-4.94475				RUN NO.	BETA	02887	02860	02713	-,02260	-,02264	-,01994	-,01959
			٠	ALPHA	12,053	16.170	20.397			_						ALPHA	11.976	16.005	20.02	24.146	28.264	32.286	36.400
				HYCH	10.330	10.330	10.330	10.330	10.330	10.330	10.330					MACH	10.330	10.330	10,330	10,330	10.330	10.330	10.330

•			10.000		1.63281 1.76772	1.61435	1.44516	1.14026			-40.000		9	170/01	1.67223	1.57788	1.43481	1.28793	1,15733
PAGE	•	DATA	ELEVTR = 1 BOFLAP = 1		CD .11954 .17156	.35039	.64452	. 82353	_	DATA	ELEVTR = -4 EDFLAP = -1				.14969	2056	40949	.54164	68953
	(RHH031)	PARAMETRIC DATA	000.88		CL .19485 .30635	. 56566	.69999 42964	4 0626.	(RHH032)	PARAMETRIC DATA	000.		J	.14917	.24386	2155	48788	69759	.79802
			BETA * AILRON * SPOBRK =		CY .03903 .03542	.03105	.02532	.02303		-	BETA = AILRON = SPOBRK =		Շ	00461	00535	9,000	-, UUB17	01217	-,01333
	.650) (V6R5)				CYN .00413	00700.	.00770	.00711	65D) (VRR5)				CYN	-,00049	99000	- 00087	60000	70100	00104
	, iwisee				CBL .00575	.00635	.00922	.01024	.) (M16E2				ē	-,00028	- 00031	00035	00050	2.000	00114
	(BE COFION				CLM 00722 01441	02577	05641 06092	10544	RE COFION				Ę	.02541	.03093	.03835	.04532	.05129	.05581
LA47 TABULATED DATA	CFHT 104 (LA-47) (BE COFIOHT) (MIGEROSD) (VBRS)				CA .07625	.06404	.09486	.10516	CFHT 104 (LA-47) (BZ C9F10WF) (MA16EZ65D) (V6R5)				5	.07403	.07559	.07577	.07728	.07938	.08028
LA47 TJ	CFHT			0 /05	CN . 21339	48922	. 84593 1.04591	1,24456	CFHT			95/0	Š	.16878	.27576	.40213	.54686	.71174	1,05159
				R. N.	BETA -5,11470	-5.17162	-5,15312 -5,10366 -5,02624	4.92188				25 25	BETA	00260	.0000	.00146	.00319	.00433	.00531
					11.99E	20.197	26.284 32.409	36,421					A I O	19.982	16.146	20.209	24.322	28.511	32.588
					10.330	10.330	10.330	10.330					7	0.00	10.330	10.530	10.330	10.330	10.330

			LAA7 T	LA47 TABULATED DATA	<					Ž	PAGE 17
			CFHT	104 (LA-47)	CFHT 104 (LA-47) (82 C9F10M7) (W116E2650) (V6R5)) (M16E)	2650) (VBR5)		(RHH033)	(5)	
									PARAMETRIC DATA	DATA	
								BETA = AILRON = SPUBRK =	000.	ELEVTR = BDFLAP =	-11.700
		25 NO.	0 /96								
7	AH PHA	BETA	3	5	M TO	é	Z.	č	J	8	ያ
10,330	12.120	-5.10791	17344	.07616	.02766	.00384	.00401	8660.	.15358	.11066	1.3851
10.330	16.214	-5,15127	.28974	07770	.03441	.00462	.00556	66950.	.25652	.15551	1.64950
10.330	20.296	-5.16987	.41401	.07850	.04030	.00449	.00779	.03267	.36108	.21724	1.66211
10.330	24,355	-5,15253	.55601	96640	.04707	.00545	.00629	.03021	.47356	.30214	1.56736
10.330	28.549	-5.10327	.71988	.08164	.05311	.00636	.00829	.02917	.59334	.41575	1.42715
10,330	32.500	-5.03010	.67853	.08149	05570	66900.	60900.	.02736	.69716	.54076	1.28922
10.330	36.539	-4.92498	1.05749	.08235	.05469	.00782	46700.	.02635	.80061	.69576	1.15070
			CFHT	104 (LA-47)	CFHT 104 (LA-47) (B2 C9F10MP) (M16E2652) (V8R5)) (M16E2	652) (VBR5)		(RHH034)	3	
				,				•	PARAMETRIC DATA	DATA	
								BETA =	000.	ELEVTR =	10.000
								AILRON =	98,000	BOFLAP =	16.300
		R NO.	0 /65								
¥U ¥	ALPHA	BETA	8	5	טרא		S.	ζ	J	8	2
10.330	11.867	01726	.22090	.07456	- 74	.00020	.00003	00434	.2008\$.11839	1.69651
10.330	16,139	01583	.35536	.08086	- 06£00.	.00004	-,00009	00498	.31887	.17645	1.60711
10.330	20,189	-,01239	. 50903	.08538	.00149	90000	00050	-,00527	.44829	.25580	1.75249
10.330	24.222	01205	.68646	.09160	00315	.00004	00016	00778	.58845	.36517	1.61144
10.330	28,356	01004	.88624	15660.	01170	.0001	00020	5.009	.73264	.50849	1.44083
10.330	32.481	00748	1.09147	.10547	02138	,0000	00008	01230	.86409	.67511	1,27992
10.330	36.490	-,00647	1.30403	.11134	03523 -	00005	00026	01288	.98217	.86500	1.13546

			LA47 T	LA47 TABULATED DATA	4					Ž.	PAGE 18
			CFHT	CFHT 104 (LA-47) (82 C9F10M7) (M116E2652) (V6R5)	(BZ C9F10MP) (W16E2	1652) (V6R5)		(RHH035)	(6)	
									PARAMETRIC DATA	: DATA	
								BETA = AILRON = SPOBRK =	000.5-	ELEVTR * BDFLAP =	10.000
		R. N.	0 /09 .								
	;	i	ā	t	3	ē	N.	č	٦	8	ک
	AF G	55.1A	20.00	5	0000	2000	00366	.03756	.21548	.12633	1.70577
	12.034	-5.08625	50162.	Aoron.	6990	19900	00483	.03318	.33116	.18296	1.81000
	10.101	17221.6-	16000.	reset.	0000	00683	.00693	.02722	.46046	.26418	1.74295
	802.02	19801.6-	16536.		- 00262	86200	.00735	.02464	.60265	37708	1.59831
	24.307	-5.12157	44404	00000	- 04442	50600	00736	26220.	.74146	.51569	1,43781
	28.380	-5.U7U85	14/59.	10150	10000	00000	22400	19810	.87127	.68132	1.27880
10.330 32.	32,491	4.99662	1.10088	.1000	05297	epeno.			45.900	A7190	1.13125
10.330 36.	36.561	4.88871	1.51162	.11279	03851	.01059	.00744	.01781	*C096.		
			CFHT	CFHT 104 (LA-47) (82 C9F10H7) (M16E26S2) (V6R5)	(BZ C9F10MP) (M16E2	652) (VBR5)		(RHH036)	6	
								-	PARAMETRIC DATA	DATA	
								BETA =	000.	ELEVTR =	40,000
								AILRON =	000.	BDFLAP =	-11.700
								SPOERK =	33.000		
		S NO.	. 57,0								
	;	i d	ð	•	3	ē	NA	Ç	J	e	ع
	ALPA	05.18	18036	07449	11	00062	-,00015	00373	.16069	.11073	1.45123
	9 6	02020	20061	07784	·	-,00054	00011	-,00475	.26593	.15845	1.67830
	10.663	5000	- P - P - P - P - P - P - P - P - P - P	0.000	•	00028	00037	00578	.37875	.22623	1.67420
	20.293	-,01/2	Dictor.	20000		00000	61000	00764	.50569	.32267	1,56721
	24.403	-,01799	16060	6000		- 0004	- 00024	00980	.63901	.45147	1,41559
	28.765	01698	.77741	.08826		48000	- 0001	- 01203	73872	57796	1,27816
10.330 32.	32,590	01574	.93370	90680.		***********	-1000	00110	1000	74418	1.13376
10.530 36.	36.888	01492	1,13659	£669Q.	.12495 -	00056	0001 4	00010	90009.		

			LA47 TAB	LA47 TABULATED DATA	_					PAGE	5E 19
			CFHT 1	04 (LA-47)	CFHT 104 (LA-47) (BE C9F10HF) (MA16E2652) (V6R5)) (M16E26	(SE) (VBR5)		(RHH037)	£	
								•	PARAMETRIC DATA	DATA	
								BETA E AILRON = SPOBRK =	.s.000 .000 .ss.000	ELEVTR = BOFLAP =	-40.000
		RUN NO.	29/ 0								
#U¥	ALPHA	BETA	Š	.5	CLM	GBL	N.	ሪ	ل	e	ع
10.330	12,139	-5.06583	19068	107694	.04120	.00400	.00386	.03731	17024	.11531	1.47634
10.330	16.212	-5.10702	.30689	.08036	.05520	.00474	.00483	.03442	.272725	.16285	1.67161
10.330	20.336	-5,12565	.44592	.08358	.06859	.00479	26900.	.02883	aneac.	20003.	1.66734
10.530	24.504	-5.10522	.60357	.08645	.08493	87500.	0400	.02361	91010.	.36363	1.30130
000.01	12 041	-5.U5773	. 17336	. 68893	04860.	00100	50400	. UC#3U.	C1050.	20011.	1.26901
000.01	56.655	00000°	39368.	38690.	11666	. מטיבט	respo-	54130.	21010		*****
10.330	60.00 00.00	4.87348	1,14251	.090Z9	.12282	.00814	Acron.	renzn.	2/868.	1066.	
			CFHT 10	CFHT 104 (LA-47)	(BZ C9F10M7C3) (W16E265D) (VBR3)	3) (M16E26;	5D) (VBR5)		(RH+038)	•	
								Ž	PARAMETRIC DATA	DATA	
							5 4 5 7	BETA = ATLRON = SPOERK =	000.	ELEVTR = BOFLAP =	10,000
		RUN NO.	61 / 0								
MACH	ALPHA	BETA	Z	5	טרא ער	æ	CYN	Շ	J	9	ع
10.330	12.046	02623	.22503	.07568	.00338 -	00002	00045	00452	.20427	.12098	1.68849
10.330	16.117	02419	.35660	.08374			00069	00568	.31934	17944	1.77964
10.330	20.141	02029	.50925	.08940			96000	00697	.44732	.25928	1,72524
10.330	24.288	01752	.69264	- 68960.	.00501	- 00001	00125	00887	.59148	.37322	1.58481
10.330	26.368	01876	.69289	.10542 -	-		00100	01189	.73558	.51709	1,42279
10.330	32,443		1.10222		_	-	00128	01340	.87119	.68411	1.27346
10.330	36.464	01302	1.31186	- 11479 -	04341	00042	00130	-,01532	.98682	.67197	1.13171

			1 744 1	1.447 TABLEATED DATA	•					Ž.	PAGE EO
			CFHT	CFHI 104 (LA-47) (8E C9F10HFC3) (M16E26SD) (V8R3)	(BE COFION	FC3) (M16E2	2650) (VBR5)		(RHH039)	(6)	
									PARAMETRIC DATA	: DATA	
								BETA # ALLRON # SPOBRK #	000.6-	ELEVTR S BDFLAP 2	10.000
		RUN NO.	. 62/0								
MACH 10.330 10.330 10.330 10.330 10.330 10.330 10.330	ALPHA 12.068 16.117 20.209 24.266 26.429 32.506	BETA -5.08077 -5.12203 -5.1389 -5.06180 -4.97791	CN .23171 .37227 .52366 .70067 .89884 1.10720	CA .07959 .08657 .09832 .10561 .11284	CLM .00363. .00356 00649 01842 01842	CBL .00542 .00563 .00564 .00764 .00908 .01008	CYN .00412 .00565 .00686 .00731 .00663	C7 .03742 .03523 .02954 .02608 .02571	CL .20995 .33360 .45922 .59606 .74017 .67310	.12627 .18650 .26836 .37820 .52078 .69017	1,66266 1,78873 1,78873 1,58139 1,26503 1,126603
			CFHT	CFHT 104 (LA-47) (B2 C9F10HPC3) (M16E265D) (VBR3)	(82 C9F10M	PC3) (M16E2	:650) (VBR5)		(RHHO4D) Paravetric Data	O) : DATA	
								BETA = ATLRON = SPDERK =	. 000. 000.	ELEVTR = BDFLAP =	-11.700
		RUN NO.	. 71/0								
MACH 10.330 10.330 10.330 10.330 10.330 10.330	ALPHA 11.988 16.180 20.307 24.417 28.572 32.724	BETA -,04228 -,04156 -,04153 -,04359 -,04357	CN .18635 .30646 .44388 .59831 .77123 .95347	CA .07662 .08269 .08580 .08989 .09323	CLM .03742 .05008 .06540 .08152 .09539 .10852	CBL 00027 00028 00038 00033 00093	CYN000400006100094000970005000050	00428 00310 00310 00310 00440	CL .16596 .27122 .38651 .50764 .63272 .75117	.11561 .11561 .16500 .23451 .32916 .45073	1.43544 1.64575 1.64813 1.54213 1.26299 1.12741

			1447	LA47 TABULATED DATA	۲۷					•	DAGE E1
	,		CFH1	1 104 (LA-47)	CFHT 104 (LA-47) (BE COFIDHTCS) (MIGEESSD) (VORS)	7C3) (M16E	2650) (VBRS)	~	(RHH041)	41)	
								-	PARAMETRIC DATA	C DATA	
								BETA = AILRON = SPOBRK =	000.88	ELEVTR = BOFLAP =	-40.000
		RGN NO.	. 72,0								
HUM	ALPHA	BETA	3	ð	Ą	ė	Š	č	J	8	5
10,330	12.123	-5.12757	.18959	.08129	75950.	.00327	.00419	.04065	.16829	.11929	1.41079
10.330	16.221	-5.17145	.30931	.08453	.05270	69800	.00562	.03777	.27339	.16757	1.63152
10.330	E0.396	-5.19184	45054	.08829	.06713	.00432	.00759	.03448	.39124	.23966	1.63246
10.330	24.538	-5,17390	.61233	69060.	.08313	.00538	.00837	.03237	.51929	.33697	1.54104
10,330	28.710	-5,12247	78390	60260.	.09619	.00662	56400	.03332	.64281	.45821	1.40289
10.330	32.762	-5.04367	.96242	.09537	.10637	.00727	.00734	.03431	.75772	.60101	1.26075
10.330	36.948	-4.93143	1.15170	.09623	.11299	.00843	.00655	.03366	.86258	.76918	1.12143
			CFHT	104 (LA-47)	CFHT 104 (LA-47) (B4 C9F10MF) (M116E26SD) (VBRS)) (M16E2	650) (VBR5)		(RHH042)	62	
								Q.	PARAMETRIC DATA	DATA	
								PETA =	000	ELEVTR =	10.000
								Z×	000.	EDFLAP =	16.300
		RUN NO.	51/0								
HOH	ALPHA	BETA	ક	ర	CLM	Je E	Z.	Շ	ل	e	ع
10.330	11.962	02542	.20050	.07148	00921	60000	00014	00364	.18133	.11149	1.62647
10.330	15.957	02612	.32804	.07613		00002	00007	00466	.29446	.16338	1.80230
10.330	20.039	02433	47709	.07982	02230	00007	-,00004	00576	.42086	.23847	1.76485
10.330	24.254	02315	.65672	.08472		10000	0001-	00725	.56395	.34700	1.62522
10.330	28.260	02251	.84520	.09123	•	00013	0000	-,00905	.70127	.48053	1,45937
055.01	32.338		1.04172	.09621	061190	.00029	\$0000.	01108	.82869	.63852	1.29783
0.330	36.378		1,25394	.10220	08157 -	00057	.00014	01288	.94496	.82600	1.14887

₹
DAT
Ę
3
¥
_
*

PAGE ER

(RHH043)

VGR5)
(M16E26SD) (
_
COFION
ě
(LA-47)
104
FHT

10.000	1.64391 1.64391 1.74934 1.62090 1.45010
ELEVTR = BOFLAP =	.11626 .17067 .24789 .35326 .49050
-5.000 ELEV. .000 BDFL/	CL .19112 .30895 .43365 .57260 .71127 .84322
BETA = AILRON = SPOBRK =	CY .03675 .03236 .02539 .02508 .02500
	CYN .00365 .00532 .00646 .00726 .00688
	CBL .00606 .00604 .00537 .00742 .00853
	CLM 00596 01354 02138 03086 04549 06365
	CA .07397 .07814 .08332 .09435 .09888
	52/ 0 CN .21112 .34419 .49250 .66699 .85883 1.06177
	RUN NO. BETA -5.10116 -5.14313 -5.13924 -5.08789 -5.01236 -4.90864
	ALPHA 12.004 16.126 20.152 24.136 26.521 32.423
	M.C.H. 10.330 10.330 10.330 10.330 10.330 10.330 10.330 10.330 10.330 10.330 10.330 10.330

CFHT 104 (LA-47) (84 C9F10HP) (M10628SD) (VRR5)

PARAMETRIC DATA

(RHH044)

-11.700	1.0000 1.0000 1.0000 1.0000 1.4000 1.4000 1.0000	
ELEVTR = BDFLAP =	CD .10564 .14477 .20959 .29673 .41006 .34552	
000.	.14687 .23642 .35608 .47510 .59114 .70588	
BETA = AILRON = SPOERK =	CY 00361 00463 00571 00676 01082	
	CYN00004000150001500017	
	CBL00031000370005100062000620011600116	
	CLM .02493 .03145 .04403 .05435 .06496	
	CA .07195 .07188 .07630 .07630 .07630	
	53. 0 CN .16612 .26904 .40669 .55600 .71517 .68860	
	BETA00153001621 .00167 .0012100062	
	ALPHA 12.362 15.362 20.463 24.347 26.500 32.610	

MACH 10.330 10.330 10.330 10.330 10.330 10.330

PAGE 23	-40,000				1.40704 1.6644 1.66134 1.58731 1.43781 1.29061
LA47 TABULATED DATA	P) (WAIGEEGSD) (VBRS) PARAMETRIC DATA	PARAMETRIC DATA	ELEVTR = BDFLAP =		CD .10734 .15231 .21745 .30289 .41667 .55452
			000.		CL .15103 .25381 .36561 .48078 .59939 .71570
			BETA = AILRON = SPOBRK =		.03619 .03346 .02393 .02768 .02663 .02581
					CYN .00393 .00529 .00611 .00751 .00739
					CBL .0036D .00415 .00415 .00626 .00681
	CFHT 104 (LA-4T) (84 C9F10MF				CLM .02834 .03569 .04530 .05692 .0775
	104 (LA-47)				CA .07324 .07545 .07743 .06053 .06053
	CFHT			94/0	CN .17019 .28622 .41628 .56269 .72564 .90178
				R. NO.	BETA -5.06244 -5.10459 -5.10626 -5.05552 -4.98017
					ALPHA 12.116 16.200 20.255 24.198 28.485 32.655
					MACH 10.330 10.330 10.330 10.330 10.330 10.330